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January 28, 2010
C6-CRE-T-10-001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, CA 90013

Attention: Information Technology Unit

Subject: **Final Waste Discharge Requirements (WDR) Monitoring Report, Compliance File CI-9310, Order No. R4-2007-0040, Biorecirculation Pilot Test, Former Building 1/36, Former Boeing C-6 Facility, 19503 Normandie Avenue, Los Angeles, Ca 90501**

To Whom It May Concern:

Please find enclosed for your review, a copy of the subject document prepared by Camp Dresser & McKee Inc. (CDM) for The Boeing Company (Boeing). This document is being submitted to meet the reporting requirements identified in the above-referenced WDR order.

"I certify under penalty of law that this document, including all attachments and supplemental information, was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

If you have any questions, please contact the undersigned at (818) 466-8822.

Executed on the 28th day of January, 2010 at Long Beach, California.

Sincerely,

Steven L. Shestag
The Boeing Company

cc: Ana Townsend, LARWQCB
Robert Scott, The Boeing Company

Enclosure

Final Waste Discharge Requirements (WDR) Report
Biorecirculation Pilot Test
Former Building 1/36
Compliance File CI-9310
Order No. R4-2007-0040

Former C-6 Facility
19503 South Normandie Avenue
Los Angeles, California 90501

January 28, 2010

Prepared for:

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Project No. 5000-55353.T4A18

The information contained in the document titled " Final Waste Discharge Requirements (WDR) Report, Biorecirculation Pilot Test, Former Building 1/36, Compliance File CI-9310, Order No. R4-2007-0040", dated January 28, 2010, has received appropriate technical review and approval. All work associated with this project was performed under the direct supervision of a California-registered Civil Engineer.

Reviewed and Approved by:

Ravi Subramanian

Ravi Subramanian, P.E.
Principal and Project Manager

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Section 1
Introduction

On behalf of The Boeing Company (Boeing), Camp Dresser & McKee Inc. (CDM) is submitting this Final Waste Discharge Requirements (WDR) report (Report) to the California Regional Water Quality Control Board, Los Angeles Region (LARWQCB) documenting the results of the Former Building 1/36 area biorecirculation pilot test. This report and the associated work has been conducted pursuant to WDR Order Number R4-2007-0040, Compliance File CI-9310 (the WDR Permit) and a WDR Monitoring and Reporting Program (MRP) (LARWQCB, August 22, 2008).

This Report documents the pilot test activities performed including design and operation of the pilot test system and monitoring and sampling results; provides data evaluation/interpretation; and presents conclusions about the pilot test. A separate semi-annual WDR monitoring report describing the pilot test and monitoring activities conducted in the Former Building 1/36 area during the second half of 2009 (July – December 2009) has been prepared by Avocet Environmental, Inc. (Avocet) for submittal to the LARWQCB (Avocet, 2010).

1.1 Project and Regulatory Background

The Former C-6 Facility is located to the southwest of the 405 and 110 freeway junction, in the city of Los Angeles, California (Figure 1). The current area of interest at the Facility (Parcel C) is bounded by 190th Street and a shopping center to the north, Normandie Avenue to the east, Francisco Street to the south, and Harborgate Way to the west. The Facility is divided by Knox Street into a northern portion (Former Building 1/36 area) and a southern portion (Former Building 2 area). The Former Building 1/36 area of the Facility (Site), which has a current address of 1451 West Knox Street, is the focus of this Report.

The primary volatile organic compounds (VOCs) detected in the groundwater beneath the Site are trichloroethene (TCE), 1,1-dichloroethene (1,1,-DCE), methyl ethyl ketone (MEK [2-butanone]), toluene, and acetone. Other VOCs are present at the Site but at lower concentrations.

Infrastructure including injection (or amendment) wells and piping were installed between August 2004 and July 2005 at the Site. In general, the injection well networks were designed to treat TCE concentrations in excess of 5 milligrams per liter (mg/L) in the groundwater beneath the Site. Prior to the pilot test, no amendment injections, other than minor testing, have been conducted at the Site and no WDR permits have been issued for the Site.

In February 2007, CDM submitted an Addendum (CDM, 2007a) to the original Building 1/36 (Parcel C) Source-Area Groundwater In-Situ Reactive Zone Pilot Study Workplan (ARCADIS G&M, Inc., May 10, 2002) previously approved by the

LARWQCB on October 29, 2002. This Work Plan Addendum supplemented the original Work Plan by proposing *in situ* enhanced bioremediation (ISEB) consisting of groundwater recirculation with pulsed addition of electron donor and bioaugmentation culture (together referred to as amendments). This approach, referred to as biorecirculation, proposed groundwater extraction from one or more wells, semi-continuous injections of amendments, and reinjection into wells upgradient of the extraction well(s).

ISEB involves degradation of TCE following the reductive dechlorination pathway: TCE → DCE (cis-1,2,DCE, trans-1,2-DCE and 1,1-DCE) → vinyl chloride (VC) → ethene (Freedman and Gossett, 1989). The goal of ISEB is to initiate or increase biostimulation by the addition of substrates (electron donors) and nutrients to an aquifer to stimulate the growth of a target consortium of bacteria ultimately resulting in increased reductive dechlorination of dissolved and sorbed contaminants (chlorinated VOCs, which act as electron acceptors). In cases where the appropriate bacterial populations are not present in an aquifer, ISEB can also involve the addition of a bacterial culture (bioaugmentation) that is highly efficient at degrading a particular contaminant. This process occurs most favorably under strongly reducing (i.e., methanogenic) conditions.

Biorecirculation is used when increasing the hydraulic gradient is advantageous for accelerating the distribution rate of the amendments through the aquifer, while maintaining the water balance. As a result ISEB with biorecirculation further increases the rate of intrinsic contaminant biotransformation compared to injections only approach.

The Work Plan Addendum was approved by LARWQCB on April 3, 2007 (LARWQCB, 2007a). In support of the amendment (particularly bioaugmentation) components of the pilot test, a request for an Individual WDR permit was submitted to the LARWQCB. Subsequently, the LARWQCB issued an Individual (Site-Specific) WDR Permit in August 2007 (LARWQCB, 2007b) which also included a WDR MRP. Additional modifications to the MRP were issued subsequently by LARWQCB in 2008 at the request of CDM (on behalf of Boeing) which are described in detail in Section 2.1.

1.2 Pilot Test Objectives and Overall Scope

The main objective of the pilot test was to verify the effectiveness of biorecirculation to reduce VOC concentrations and mass within the Bellflower Aquitard (B-Sand) beneath the Site. Specific objectives of the pilot test were as follows:

- Begin active VOC mass reduction in the B-Sand beneath the Site.
- Evaluate the rate of VOC biodegradation and determine amendment concentration, volume, and delivery specifications to achieve optimum degradation rates.

- Evaluate amendment fate and transport characteristics in the B-Sand underneath the Site.

- Develop design parameters to support the expansion of the biorecirculation treatment area, as appropriate.

1.2.1 Overall Approach

The biorecirculation pilot test was conducted with existing extraction and amendment wells and using groundwater recirculation and semi-continuous delivery of amendments. Figure 2 shows the pilot test well layout and other pertinent Site features. Key elements of this approach are listed below:

- Groundwater extraction in order to create a recirculation loop in the saturated zone thereby accelerating the distribution of amendments while maintaining the water balance. Up to two wells (EWB001 and monitoring well WCC_06S used temporarily for extraction) were used to extract groundwater from the B-Sand underlying the Site (Figure 2).

- Use of semi-continuous or pulsed amendment injections into the B-Sand at low operating pressures using a limited subset of amendment wells and conveyance piping. Semi-continuous injections at low operating pressures reduce the pressure buildup issues associated with batch-injecting large volumes of amendment over a short period of time into tight soils. The amendments are added into the extracted water prior to reinjection (or directly into the injection wells in case of bioaugmentation cultures) in order to promote the complete biodegradation of contaminants.

Evaluation and selection of the appropriate amendments for the pilot test is discussed in Section 2. A brief overview of the pilot test operation is provided below.

1.2.2 Overview of Pilot Test Operation

The pilot test system was designed and constructed between February and August 2007 following which system operation began in September 2007. System operation was subsequently limited by the low production rate of the extraction well EWB001 (less than 1 gallon per minute [gpm]. CDM then implemented additional actions between September and December 2007 in an attempt to increase the groundwater production rate from the extraction well and to identify other potentially suitable supplemental groundwater sources. These actions included aggressive redevelopment of the extraction well EWB001 and aquifer pump tests (APTs) in the same well and other select existing monitoring wells (Avocet Environmental, Inc. [Avocet], 2008a). CDM then restarted the system on December 17, 2007 with extracted water from the redeveloped extraction well EWB001 and operated the system intermittently with flows ranging from four to eight gpm until December 21, 2007, when it was temporarily shut down for the 2007 holiday season. The system was then restarted in January 2008 and operated with EWB001. Subsequently, another well (monitoring well WCC_06S, which was selected based on the APTs conducted in

2007) was temporarily brought online as an extraction well during portions of the pilot test to augment the total groundwater extraction rates. The pilot system operated through July 2008, at which point it was determined that biorecirculation had achieved adequate distribution of electron donor and established conditions supportive of reductive dechlorination in the pilot test area (based on the system operational data and WDR monitoring data). As a result, the biorecirculation operations were concluded on July 31, 2008 but WDR groundwater monitoring continued in accordance with the MRP with the last monitoring event conducted in September 2009. In addition, bioaugmentation was not needed during the pilot test since the WDR monitoring data demonstrated complete reductive dechlorination with biostimulation of indigenous bacteria. Additional details of the system operation, and the WDR monitoring results and evaluation are presented in Sections 3 and 4, respectively.

1.3 Report Organization

This report is organized as follows:

- Section 2 provides a brief discussion of the WDR Permit and associated MRP modifications and pre-design activities, including amendment evaluation and selection, which were accomplished as part of the pilot test implementation.
- Section 3 summarizes the implementation activities including the design, installation, and operation of the pilot test and a brief description of the associated groundwater WDR monitoring program.
- Section 4 presents the groundwater WDR monitoring data collected during the pilot test and provides a brief evaluation of the key parameters.
- Section 5 provides conclusions developed from the operation and monitoring of the pilot test through September 2009 (the final WDR monitoring event) and description of proposed future activities.
- Section 6 contains a list of references used in the preparation of this report.
- Section 7 contains the tables used in the preparation of this report.
- Section 8 contains the figures used in the preparation of this report.

The following appendices are included in the report:

- Appendix A - WDR Groundwater Monitoring Data Trends for Key Wells

Information presented in Tables 1 and 4 through 11, and Figures 3 and 4 were provided by Avocet, who performs the WDR monitoring at the Site.

Section 2
Permitting and Pre-Design Activities

This section provides a brief description of the WDR permitting and other pre-design activities that were accomplished as part of the pilot test implementation.

2.1 WDR Permit and Revisions

The WDR Permit and the associated MRP (which is a related but separate part of the permit) was issued by LARWQCB on August 10, 2007. Subsequently, two revisions were made to the MRP in 2008 at the request of CDM (on behalf of Boeing) as described in the following paragraphs (only those associated with the pilot test are mentioned):

The first revision was made in February 2008 (LARWQCB, 2008a) to incorporate the following significant changes to the MRP:

- Allowed use of monitoring well WCC_06S as a contingency extraction well for the pilot test (CDM, 2008a).

- Subdivided the Former Building 1/36 Group A (Amendment Points) and Group B (Monitoring Wells) wells into Groups A1 and A2 and B1 and B2. The Group A1 wells were designated as the primary amendment points while the Group A2 wells were designated as the backup amendment points. The revised MRP required monitoring of only the Group B1 wells when amendment is introduced only in the Group A1 points (CDM, 2008b).

The second revision, made in August 2008 (LARWQCB, 2008b), included the following significant changes to the MRP:

- Revised the sampling schedules to coordinate the Former Building 1/36 and Former Building 2 area programs and, when possible, to coordinate these programs with the routine semi-annual and annual site-wide groundwater monitoring events (CDM, 2008c).

- Revised the Former Building 1/36 MRP to change upgradient (Group D) well AW0055UB to a performance monitoring well (Group B) and identified well MWB006 as the new upgradient well (CDM, 2008d).

All WDR monitoring since August 2008 has been conducted pursuant to the August 2008 MRP (LARWQCB, 2008b), which is the most current version.

2.2 Amendment Evaluation and Selection

In accordance with the LARWQCB-approved Pre-Remediation Workplan (CDM, 2006), an evaluation was performed to identify the most suitable amendments for use in the pilot test and for potential future bioremediation at the Site or other areas of the Facility. In order to properly identify and consider the factors that affect

amendment selection, the evaluation was conducted in two phases – an initial screening evaluation and a laboratory treatability study. A brief description of these two phases of evaluation and the associated results are presented below.

2.2.1 Initial Screening Evaluation

An initial screening evaluation of several amendments was conducted in October 2006 to identify the most appropriate amendments for further evaluation and final determination by the laboratory treatability study phase of the evaluation.

2.2.1.1 Electron Donors

A number of organic substrates have been used to stimulate biological reduction at various sites across the U.S. In general, the types of electron donors that can be used at a site are generally divided into two categories – aqueous (fast-release) and slow-release, which are described below.

- Aqueous electron donors generally have high solubility and low viscosity, and are easily distributed in the subsurface. They can facilitate the rapid onset of strongly reducing conditions to poise the subsurface quickly for efficient dechlorination and can have the ability to achieve greater enhanced dissolution from a residual source area. However, they are utilized rapidly in the subsurface and therefore have a short to medium longevity in the field (typically few weeks to few months depending on the site). Examples of fast release electron donors include lactate, propionate, butyrate, acetate, benzoate, methanol, ethanol, molasses, and whey (both solid and liquid).

- Slow-release electron donors can have very high viscosities (up to and including being a solid) and relatively low solubilities, which can limit the ability to distribute them over large areas. The relatively slow utilization can result in longer timeframes for establishment of appropriate redox conditions. However, the slower utilization of these donors also implies that slow-release electron donors have much higher longevities in the subsurface, on the order of one to several years. Examples of slow release electron donors include edible oils (either as pure phase or as emulsified vegetable oil [EVO]), Hydrogen Release Compound (HRC®), and polymeric organic materials such as bark, mulch, and chitin.

Based on the proposed pilot test approach and potential future bioremediation at the Site or other areas of the Facility, CDM evaluated the following aqueous and slow release donors during this phase, with the intent of including five aqueous donors and one slow-release donor in the laboratory treatability study:

- Aqueous donors - Ethanol and isopropanol, citric acid and sodium citrate, whey and lactose, lactate (as sodium lactate and lactic acid), complex sugars (corn syrup and high fructose corn syrup), molasses, glycerin/other polyols*, and proprietary fermentation mother liquor*

  *These are proprietary products identified by JRW Bioremediation, LLC of Lenexa, Kansas (JRW).

- Slow-release donors - Emulsified Oil Substrate (EOS®), Newman Zone®, and HRC-Advanced®

It should be noted that the some of the donors listed together in the same bullets (for e.g. citric acid and sodium citrate, EOS® and Newman Zone®) are considered to be similar enough in properties and effectiveness. In those cases, only one donor from each group was planned for evaluation in the laboratory study.

The donors were evaluated based on the following criteria, as described in the Pre-Remediation Workplan (CDM, 2006): dechlorination performance; administrative requirements; handling and Storage Requirements; and relative costs.

2.2.1.2 Bioaugmentation Cultures

Based on previous amendment injection activities at the Facility and a review of historical groundwater monitoring data, it was expected that bioaugmentation would most likely be needed in order to stimulate complete dechlorination (to ethene) and to reduce lag times. As a result, CDM also performed a preliminary evaluation of bioaugmentation cultures from three vendors (Shaw, SiRem, and Bioremediation Consulting Inc. [BCI] who proposed to develop a culture specifically for the Site) for testing in the treatability study. The criteria used in the evaluation of the cultures consisted of: potential effectiveness to degrade Site contaminants; culture availability; culture production capacity; and relative costs. Information obtained to support the evaluation was based on CDM's past experience and discussions with the three vendors.

2.2.1.3 Results of Screening Evaluation

Based on the screening evaluation, CDM selected the following electron donors and bioaugmentation cultures for the laboratory treatability study:

- Aqueous donors – citrate (sodium citrate), whey powder, lactate (sodium lactate), JRW proprietary fermentation mother liquor, and whey powder plus JRW nutrient

- Slow-release donor - Newman Zone® (This was chosen for potential future use at the Site or Facility where injections only may be appropriate)

- Bioaugmentation cultures - Shaw's SDC-9™ and SiREM's KB-1™

Although BCI was willing to develop a culture specifically for the Site, they did not have the desired production capacity or a defined schedule for developing the culture. As a result, BCI was eliminated from further consideration.

2.2.2 Laboratory Treatability Study

Based on the above screening evaluation and the intended donor application method for the pilot test (i.e., biorecirculation), aqueous electron donors appeared to be the best suited for this pilot test. In addition, most bioaugmentation applications typically have been performed using aqueous electron donors because of the need to stimulate rapid growth of the injected organisms.

In order to make a final determination of the most appropriate electron donor(s) and bioaugmentation cultures for the pilot test and for potential future bioremediation, a laboratory treatability study was conducted between October 2006 and March 2007 in CDM's environmental treatability laboratory in Bellevue, Washington. The treatability study was performed in general accordance with the Pre-Remediation Workplan (CDM, 2006) with modifications as appropriate based on the results of the screening evaluation. The study evaluated the five aqueous donors (sodium citrate, whey, sodium lactate, proprietary JRW mother liquor, and whey plus proprietary JRW nutrient), one slow release donor (EVO - Newman Zone®), and the two bioaugmentation cultures (Shaw's SDC-9™ and SiREM's KB-1™) selected from the screening evaluation (Section 2.2.1.3). Groundwater and soil samples from the Site were used to test each of these donors under three test conditions: Shaw's SDC-9™; SiREM's KB-1™, and no bioaugmentation (total of 18 test conditions). The latter set of six donor conditions with no bioaugmentation was the result of not selecting the third culture (from BCI) due to the reasons mentioned in Section 2.2.1.3.

2.2.2.1 Treatability Study Results

The results of the treatability study (CDM, 2007c) indicated that whey (fast release donor) was the primary choice of electron donor for the pilot test with lactate as the second or backup choice. Whey exhibited the fastest response time in terms of TCE to VC conversion. It was also capable of complete reductive dechlorination of TCE to ethene with bioaugmentation and was expected to have an aquifer life span of at least two months and possibly greater than five months based on prior experience. Furthermore, whey appeared to be the most cost-effective of the recommended donors based on an economic evaluation done as part the laboratory treatability study.

The treatability study results also showed that the indigenous microbial community was capable of dechlorination of TCE to VC, but not to ethene. This was consistent with field observations in other previously biostimulated areas at the Facility and further indicated the necessity of bioaugmentation during the pilot test to achieve complete dechlorination to ethene in a reasonable timeframe. Shaw's SDC-9™ culture was selected as the recommended bioaugmentation culture based on its ability to utilize a wide range of electron donors and achieve complete reductive dechlorination of TCE to ethene for the site-specific conditions.

2.3 Health and Safety

During Site operations, field personnel followed procedures and safeguards described in a Site-specific CDM Health and Safety Plan (HASP) (CDM, 2007b). The HASP was prepared specifically for this project in accordance with the applicable requirements for Title 29 CFR, Section 1910.120 and 8 CCR 5192. A copy of the HASP was transmitted to LARWQCB under a separate cover on May 4, 2007.

Prior to beginning the field activities, CDM and subcontractor field personnel and key Boeing management staff including Pacific EH&S participated in a health and safety kickoff meeting at the Site, where the contents of the HASP was discussed with the personnel present. CDM also prepared a project-specific dash card which contained key contact numbers and Site response information. Field personnel including subcontractors were required to have these cards with them during all site work.

Section 3
Pilot Test Activities

3.1 Pilot Test Design and Installation

The pilot test system was designed and constructed between February and August 2007.

Design of the pilot system consisted of the following key activities:

- Determination of the number, type, and depth of extraction, amendment and monitoring wells (as appropriate), which consisted of a combination of previously existing and new wells installed for the pilot test.

- Analytical groundwater modeling to determine the anticipated optimal extraction and injection flow rates, assess the number and location of amendment wells, monitoring points, and predict donor distribution.

- Determination of electron donor and bioaugmentation dosage rates and frequency. Based on the results of the CDM laboratory treatability study documented in Section 2, the following initial dosage rates and frequencies were selected:

  - Pulsed addition of whey in the extracted groundwater at an approximate frequency of ten percent of the operational time to achieve an approximate three percent (by weight) concentration in the injected groundwater. Pulsed addition (periodic, relatively high concentration pulses) of electron donor to the system as opposed to continuous addition of low donor concentrations was selected to reduce the likelihood of biofouling.

  - Addition of approximately 20 to 40 liters of the selected bioaugmentation culture (Shaw's SDC-9™) directly into each injection well as an one-time event once appropriate aquifer conditions (i.e., at least sulfate-reducing) are reached as determined by the performance monitoring data.

The final pilot test system consisted of the following key components:

- Installation and development of a new performance monitoring well (EWB002), which was completed as a six-inch diameter well for potential future use.

- Exposure and wellhead modifications of four previously installed amendment wells (AW0067UB, AW0066UB, AW0065UB, and AW0064UB) for use as B-Sand injection wells.

- Exposure and wellhead modifications of five previously installed amendment wells (AW0074UB, AW0075UB, AW0076UB, and AW0077UB screened in B-Sand, and well AW0073C screened in C-Sand) for use as downgradient performance monitoring wells.

- Selection of other previously existing monitoring wells for monitoring the pilot study performance as described in Section 3.3.

- Installation of a submersible pump and associated equipment in the B-Sand extraction well EWB001, associated wellhead modifications, and connection to underground pipeline network for transporting the extracted water to an existing remediation compound located in the northeast corner of the Site.

- Mobilization and placement of a portable solids handling and mixing equipment inside the existing remediation compound and connection to the existing piping network and other treatment equipment (which were housed in a shipping container as described in the next paragraph). The portable system allowed for mixing of whey powder into the extracted water for reinjection into the amendment wells. The major components of the system included a pneumatic vacuum, metered screw feeder, wash-down hopper, eductor, flow meters and generator.

- Periodic delivery and storage of whey powder in approximately 1,800 to 2000-lbs super sacks in the treatment compound.

- Installation of aboveground equipment inside a shipping container placed adjacent to the existing remediation compound. These equipment included portion of the injection piping, mechanical and electrical components, and appropriate instrumentation (gages, flowmeters, etc.) and controls to transfer the whey solution to the injection wells. The shipping container also included a liquid electron donor storage tank, metering pumps and mixing equipment to introduce liquid electron donors (lactate) into the injection wells as a contingency plan in case whey injections were not successful.

- Installation of all other new conveyance piping and connection to existing piping, including associated electrical and controls wiring.

- Configuration and programming of instrumentation and automatic control equipment.

In addition to the above activities, monitoring well WCC_06S was converted in March 2008 to a temporary extraction well to provide additional groundwater for the pilot test. Activities performed to convert this well to an extraction well included installation of a submersible pump and associated equipment, associated wellhead modifications, installation of temporary aboveground hoses protected by hose ramps (in traffic areas) to convey the extracted water to the remediation compound, and associated electrical and controls modifications to the existing system.

Table 1 provides the construction details for the extraction, injection, and monitoring wells associated with the pilot test. Figure 2 shows the locations of these wells.

3.2 Pilot Test Operational Data and Observations

Initial operation of the pilot system operation began in September 2007. System operation was subsequently limited by the low production rate of extraction well EWB001 (less than 1 gpm) which was substantially less than the anticipated design flow of 12 gpm. Since operation at this low flowrate was not expected to achieve the objectives of the pilot test, the system was shut down on October 18, 2007.

CDM then implemented additional actions between September and December 2007 in an attempt to increase the production rate from extraction well EWB001 and identify other potentially suitable supplemental groundwater sources. These actions, which are described in detail in the Fourth Quarter 2007 WDR Monitoring Report (Avocet, 2008a), consisted of: aggressive redevelopment and short-term pumping tests of extraction well EWB001 and five other existing monitoring (WCC_06S and WCC_03S) and amendment (AW0074UB, AW0075UB, and AW0076UB) wells to determine their potential for use as replacement or supplemental extraction wells; and long-term (24 to 30 hours) constant-rate APTs of wells EWB001 and WCC_06S to determine long-term sustainable flow rates.

The results of these additional actions (Avocet, 2008a) indicated that:

- Well EWB001 can sustain an estimated flow rate of five gpm which, even though lower than the design rate of 12 gpm, was determined to be sufficient enough to meet the objectives of the pilot test; and

- Well WCC_06S could be used as an alternate supplemental source of extracted water with an estimated sustainable flow rate of about seven gpm.

Following completion of the above actions, the pilot system operation was initiated. Tables 2A and 2B provide summaries of amendment injections on a monthly and daily basis, respectively. The following sections provide a summary of the key data and observations during the pilot test operation.

3.2.1 Third and Fourth Quarters 2007

Key operational data and observations during this period included the following:

- CDM restarted the system on December 17, 2007 with extracted water from redeveloped well EWB001 reinjected into two of the four planned injection wells, AW0066UB and AW0067UB. Since the total flow was less than the anticipated 12 gpm design flowrate, it was decided to continue the pilot test with injections into only these two wells to maximize the subsurface distribution. These two wells were used for the remainder of the test as injection wells. The system was operated intermittently with flows ranging from four to eight gpm until

December 21, 2007, when it was temporarily shut down for the rest of the quarter during the holidays.

- A total of approximately 230 pounds (dry weight) of whey (11,534 gallons as solution) were injected into wells AW0066UB and AW0067UB during this period (Table 2B).

- No bioaugmentation cultures were added to the injection wells during this period.

3.2.2 First Quarter 2008

Key operational data and observations during this period included the following:

- The pilot test was conducted using extracted water from well EWB001 and purge water stored in Baker tanks and generated from the APTs conducted on wells EWB001 and WCC_06S.

- The pilot test was operated through end of February 2008 with groundwater extracted from well EWB001 and APT water as mentioned above. The EWB001 groundwater was appropriately mixed with whey prior to injection during approximately ten percent of the time the system was operational. The donor solution (average concentration of approximately three percent by weight) was then injected with flow rates ranging from two to six gpm (average flow rate of approximately 3 to 3.5 gpm). When reinjection with whey was not occurring, the system was operated on a continuous recirculation basis, reinjecting an average of 3 gpm of the extracted groundwater from EWB001.

- The system was operated with the APT water amended with approximately three percent whey solution and injected into wells AW0066UB and AW0067UB at total flow rates of approximately five gpm for approximately 22 percent of the time the system was operational (approximately 16 hours over a period of three days from February 26 through 28, 2008).

- Due to biofouling suspected in the injection wells and the amendment conveyance piping as evidenced by the high injection pressures and visual observations of biofilm, the pilot system was shut down on February 29, 2008 to evaluate and implement options to address biofouling.

- Measures to mitigate and address biofouling were implemented in March 2008 and consisted of: flushing of the piping at high flow rates with extracted and potable water; and treatment of wells and pipelines using WDR Permit-approved chemicals, glycolic acid (LBA™) and commercial bleach, followed by purging/ flushing (Avocet, 2008b). In addition, the wellheads of the four original injection wells (AW0064UB through AW0067UB) were modified to improve injection efficiency and reduce the potential for future biofouling (Avocet, 2008b).

- The system was restarted on March 26, 2008 and was operational through the end of the quarter. During this period, APT water was treated through the pilot system with approximately 2.7 percent whey solution and injected at total flow rates of approximately 6.5 gpm for approximately 25 percent of the time the system was operational (22 hours over four days).

- During the remaining time period between March 26 and 31, 2008, the system was operated on a continuous recirculation basis with only the groundwater from extraction well EWB001 (average of three gpm). One shutdown of the system occurred for approximately 16 hours on March 30, 2008, which was caused by an electrical fault.

- A total of approximately 7,547 pounds (dry weight) of electron donor (28,952 gallons as solution) was injected into wells AW0066UB and AW0067UB during the First Quarter 2008 (Table 2B).

- No bioaugmentation cultures were added to the injection wells during this period.

3.2.3 Second Quarter 2008

Key operational data and observations during this period included the following:

- In April 2008, WCC_06S was brought on-line as an extraction well to provide additional groundwater on an as needed basis for donor injections and recirculation.

- The pilot test used extracted water from wells EWB001 and WCC_06S at average rates of approximately 3 gpm and 4 gpm, respectively, for injection into amendment wells AW0066UB and AW0067UB. During periods of amendment, whey was injected as an approximate 3 percent solution into the two amendment wells, with flow rates ranging from 2 to 8 gpm (average flow rate of approximately 4 gpm). The temporary operation of well WCC_06S as extraction well was implemented from April 17 to June 25, 2008.

- During this quarter, the system was operational 66 percent of the time, with whey being injected during 25 of the 91 days of the quarter. Downtime was associated with system maintenance and additional biofouling observed in the system. Similar to the work performed in First Quarter 2008, CDM used chemical cleaning followed by purging and flushing (Avocet, 2008c) to address and mitigate biofouling. Towards the end of the test, CDM also recirculated groundwater (without donor) through the system for a week, which lowered injection pressures substantially.

- Black suspended solids were observed in the extracted water from well WCC_06S during normal operation and during the implementation of biofouling mitigation measures. The presence of these solids, considered to be associated with biological activity, suggested that the operation of well WCC_06S significantly improved the

hydraulic distribution of electron donor in the area of the pilot test. To minimize the impact of these suspended solids on the system components, inline cartridge filters were installed to filter the solids prior to recirculation.

- A total of approximately 8,686 pounds (dry weight) of electron donor (34,871 gallons as solution) was injected into wells AW0066UB and AW0067UB during the Second Quarter 2008 (Table 2B).

- No bioaugmentation cultures were added to the injection wells during this period.

3.2.4 Third Quarter 2008

Key operational data and observations during this period included the following:

- The test was conducted using only extracted water from well EWB001 through end of July 2008. Well WCC_06S was not operated as an extraction well due to the presence of biosolids, which as mentioned previously, indicated that the well had improved the hydraulic distribution of electron donor in the area of the pilot test and was therefore no longer needed.

- During recirculation, groundwater was extracted from well EWB001 at an average rate of approximately 3.7 gpm (ranging from two to six gpm). During July 2008, the system was operational 58 percent of the time, with whey amendment during 18 of the 31 days. The donor solution (average concentration of 3.1 percent) was injected into amendment wells AW0066UB and AW0067UB with an average flow rate of approximately 2.7 gpm.

- A total of approximately 2,157 pounds (dry weight) of whey (8,621 gallons as solution) was injected into wells AW0066UB and AW0067UB during the Third Quarter 2008 (July 2008) (Table 2B).

- No bioaugmentation cultures were added to the injection wells during this period.

3.2.5 Biorecirculation Completion

Based on the system operational data and WDR monitoring data through June 2008, it was determined that the biorecirculation system had achieved adequate distribution of electron donor and established conditions supportive of reductive dechlorination in the pilot test area. As a result, biorecirculation operations were concluded on July 31, 2008. WDR groundwater monitoring was, however, continued through September 2009 in accordance with the MRP to continue evaluating the effectiveness of the pilot test in meeting the objectives.

During the entire operational period of the pilot test (December 2007 through the end of July 2008), approximately 881,000 gallons groundwater were recirculated in the pilot test area with a total of 18,621 pounds (dry weight) of whey (83,978 gallons as solution) injected in the two wells. The dates and quantities of electron donor injection during the system operations are summarized in Tables 2A and 2B.

As mentioned in Sections 3.2.1 through 3.2.4, bioaugmentation using Shaw SDC-9™ culture was not performed during the pilot test. This was based on the results of the performance monitoring (described in detail in Section 4) which demonstrated that TCE and 1,1-DCE was converted to ethene with biostimulation of indigenous bacteria. As a result, added bioaugmentation was not required to achieve the objectives of this study.

Key components of the active system (well pumps and whey mixing and handling equipment) were dismantled and either shipped offsite or stored onsite in a secured area during August 2008. The residual whey was removed from the site in December 2008 and transported to a local landfill for disposal as nonhazardous waste.

3.3 Pilot Test WDR Groundwater Monitoring Program

A comprehensive WDR groundwater monitoring program was implemented in accordance with the latest MRP (August 2008) to monitor the progress and evaluate the effectiveness of the pilot test. The key elements of the monitoring program included:

- Baseline monitoring of select wells prior to the operation of the pilot system and prior to any amendment additions to identify pre-injection conditions. Monitoring points included the extraction well and the WDR monitoring points included in the MRP.

A total of two Baseline monitoring events were performed in May and June 2007 for the wells with the exception of well EWB002 which was monitored in June and December 2007.

- Performance monitoring of select wells on a periodic basis throughout the pilot test to confirm the effectiveness of the biorecirculation process.

The performance monitoring events were initiated during the first full month of donor injections (January 2008) and were generally conducted monthly (for most analytes), for the first six months (through June 2008). This initial accelerated frequency of monitoring was needed in order to assess the relatively rapid changes that typically occur in aquifer conditions during the initial periods of electron donor addition. Following the first six months, the performance monitoring frequency was reduced to quarterly for the remainder of the first year (2008) and semi-annually

during the second year (2009), with the last required event completed in September 2009.

In addition, select wells which were located upgradient and downgradient of the treatment area, were also monitored to verify that degradation products associated with the pilot test were not migrating outside the treatment area.

3.3.1 WDR Monitoring Plan

Table 3 provides the WDR Sampling and Analyses Plan outlined in the original MRP (LARWQCB, 2007), the first MRP revision (LARWQCB, 2008a), and the latest MRP revision (LARWQCB, 2008b) of the WDR Permit. The location and type (Group) of WDR monitoring wells based on their function (i.e. performance monitoring, upgradient, or downgradient) per the latest MRP in the WDR Permit is shown on Figure 2 and described below:

- Group A
  - Group A1: AW0066UB and AW0067UB
  - Group A2: AW0064UB and AW0065UB
- Group B
  - Group B1: AW0075UB, AW0076UB, AW0077UB, EWB002, AW0055UB, and AW0073C
  - Group B2: WCC_06S and AW0074UB
- Group C: TMW_07 and WCC_12S
- Group D: MWB006

Group A points consisted of amendment wells where donor was initially planned to be introduced. Due to the lower than anticipated flow from extraction well EWB001, the Group A points were subdivided into: Group A1 points, which are amendment points where donor was introduced; and Group A2 points, which were backup amendment injection points for potential use in the event of higher flows from EWB001, contingency extraction well WCC_06S, or addition of another extraction well.

Group B sampling points consisted of monitoring wells that were located within the treatment zone to evaluate electron donor consumption and distribution and the effectiveness of the biologically active zones over time. Due to the subdivision of Group A points, the Group B points were also subdivided, with the following criteria used for determining which of the Group B wells would be monitored:

- When donor is introduced in Group A1 wells, only Group B1 wells will be monitored.

- When donor is introduced in Group A1 and Group A2 wells, then all Group B wells (B1 and B2) will be monitored.

As mentioned in Section 3.2, no amendment injections were performed in Group A2 points, which were then primarily used for providing additional monitoring data throughout the pilot test.

The Group C sampling points were downgradient monitoring wells, and the Group D sampling point was an upgradient monitoring well. As mentioned in Section 2.1, MWB006 was selected in August 2008 as the Group D sampling point replacing AW0055UB which was added as a Group B1 sampling point. As a result, AW0055UB and MWB006 met many of the monitoring requirements listed in the MRP prior to August 2008, but not all.

Details of the sampling and analytical procedures, monitoring frequencies, and associated sample handling and field and laboratory quality procedures are provided in the individual WDR monitoring reports (Avocet, 2008a, 2008b, 2008c, 2009a, 2009b, and 2010). It should be noted that any additional monitoring performed (additional analyses, additional wells sampled, additional sampling events, etc.) and any discrepancies/ deviations from the MRP are also provided in the appropriate individual WDR monitoring reports.

Section 4
Pilot Test Data Presentation and Evaluation

The performance of the pilot test was evaluated based on the extent of electron donor distribution, changes in biogeochemical conditions, changes in the microbial population, and extent and rate of dechlorination within the pilot test treatment area. These parameters were quantified throughout the pilot test by performance of field measurements and laboratory testing of groundwater samples from the pilot test WDR monitoring wells by Avocet. Field water quality measurements consisted of temperature, pH, specific conductance, oxidation reduction potential [ORP], dissolved oxygen [DO]), turbidity, and ferrous iron. Laboratory testing consisted of analyses of the groundwater samples for one or more of the following compounds:

- VOCs using U.S. Environmental Protection Agency (EPA) Method 8260B;
- Total organic carbon (TOC) using EPA Method 9060;
- Volatile fatty acids (VFAs) using IC Method 8M23G (Microseeps, Inc., Pittsburg, Pennsylvania);
- Dissolved hydrocarbon gases (DHGs: ethene, ethane, and methane) using RSK 175;
- Dissolved minerals (sulfate, nitrate, and nitrite, or chloride) using EPA Method 300 Series;
- Total dissolved solids (TDS) using EPA Method 160.1; and
- Quantitative Polymerase Chain Reaction (qPCR) assay for the Dehalococcoides (DHC) 16S rRNA gene and functional genes *tceA*, *bvcA*, and *vcrA* (North Wind, Inc., Pocatello, Idaho).

As mentioned in Section 3.3.1, details of the sampling and analytical procedures are provided in the individual WDR monitoring reports (Avocet, 2008a, 2008b, 2008c, 2009a, 2009b, and 2010). The field and laboratory analytical results for these parameters for the WDR monitoring events to date (as of September 2009) are summarized in Tables 4 through 11 and discussed in the following sections. Appendix A provides concentration versus time trends for the key compounds monitored in the following key pilot test wells: MWB006, AW0055UB, AW0066UB, AW0067UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C.

4.1 Groundwater Levels

Table 4 provides the depth-to-water measurements and calculated groundwater elevations for the pilot test WDR wells to date.

The most recent (September 2009) groundwater elevation contours for the WDR and other routine groundwater monitoring wells screened in the B-Sand and C-Sand are shown in Figures 3, and 4, respectively. The average hydraulic gradient in both the B-and C-Sands across the Facility is approximately 0.0008 ft/ft with flow toward the south, which is generally consistent with historical data.

The B-Sand groundwater contours shown in Figure 3 depict a localized groundwater mound surrounding the Site WDR wells. The highest mound (1.1 to 1.2 feet based on the average water levels in the WDR wells in the pilot test treatment area) was observed in April 2008 which was approximately the mid-point of the biorecirculation activities. The wells which showed the most increase in groundwater levels during that same time period were the active injection wells, AW0066UB (1.8 feet) and AW0067UB (2.3 feet). Since then the groundwater levels in the pilot test treatment area have been decreasing with an average mounding of 0.9 to 1 foot observed in the wells during September 2009, including in injection wells AW0066UB (1.5 feet) and AW0067UB (1.2 feet). The mounding is believed to be an artifact of the biorecirculation activities and most likely associated with the presence of significant quantities of biomass, especially near the injection wells, creating an apparent mound.

4.2 Electron Donor Delivery and Distribution

The distribution and concentration of electron donor injected (whey) during and post biorecirculation operations were monitored by measuring the TOC and VFA concentrations at the injection and monitoring wells. The VFA and TOC concentrations measured in the pilot test WDR wells are presented in Tables 5 and 6, respectively. Appendix A includes concentration trends of these compounds for the key pilot test wells. Noteworthy observations include:

- In general, VFA concentrations increased in the range of few thousand mg/L at the injection wells AW0067UB and AW0066UB and in the range of few hundred mg/L in the key performance monitoring wells following injections. These elevated VFA concentrations at the wells were sustained through active biorecirculation operations with some wells showing sustained VFA concentrations two to eight months (March 2009) following completion of biorecirculation.

- As expected, VFA increases in the monitoring wells largely constituted of butyrate, lactate, and propionate in addition to acetate indicating the desired fate (fermentation) and transport of whey within the pilot test area.

- TOC concentrations generally correlated well with the VFA data during and post biorecirculation. TOC levels of greater than 100 mg/L in some of the wells even after 14 months following the completion of biorecirculation indicates excellent longevity of whey, which is substantially higher than typically seen at other sites.

- Overall, the increases in TOC and VFA concentrations indicate that the electron donor injection concentrations (approximately three percent), volumes (approximately 84,000 gal), and frequency (approximately ten percent of the operational time) coupled with the delivery method (recirculation) were effective in achieving good electron donor distribution at least 100 feet downgradient of the injection wells and most likely in the primary treatment area extending approximately 300 feet (from the vicinity of the injections wells to the extraction well EWB001), and approximately 70 ft upgradient of the injection wells. Based on the VOC results and electron donor distribution observed at least 100 feet crossgradient of the injection wells, temporary operation of well WCC_06S as extraction well appears to have clearly enhanced electron donor distribution in this area.

4.3 Biogeochemical Parameters

Evaluation of parameters associated with the biogeochemical conditions indicates if conditions are favorable for biodegradation of contaminants to progress at a site. These parameters, which can also serve an indirect line of evidence for occurrence of biodegradation within the aquifer, consist of:

- Redox conditions monitored by measuring the ORP and concentrations of inorganic electron acceptors (DO, nitrate, ferrous iron, sulfate, and methane) and their reduced products. The redox conditions typically progress from aerobic → nitrate reducing → iron reducing → sulfate reducing → methanogenic following addition of a sufficient supply of electron donor. In general, decreases in concentrations of DO, nitrate, and sulfate, and increases in ferrous iron and methane indicate that conditions are favorable for dechlorination.

- Biological Activity Indicators consisting of pH and alkalinity. pH levels can indicate whether aquifer geochemistry is favorable for biological activity. pH levels in the optimal range (>5.0) provide verification that the progress of dechlorination (i.e. survival and performance of the DHC bacteria) within the pilot test area is not being hindered. Alkalinity is an indicator of microbial respiration because carbon dioxide production increases bicarbonate levels at typical groundwater pH levels. Alkalinity is also increased by the fermentation of injected electron donor, providing an indication of whether electron donor utilization is occurring in the treatment area.

Each of these parameters are discussed in the following sections.

4.3.1 Redox Conditions

Table 7 shows the ORP, DO, and ferrous iron data for the pilot test WDR wells to date. Table 8 shows the nitrate and sulfate concentrations for the pilot test WDR wells to date. Table 9 shows the methane concentrations for the pilot test WDR wells to date. Appendix A includes concentration trends of these compounds for the key pilot test wells. Noteworthy observations include:

- Reductive dechlorination is generally possible with ORP values less than approximately +50 mV, but is more favorable at values less than approximately -100 mV (EPA, 1998). Overall, the ORP values decreased and were sustained in the appropriate range (near or <-100 mV) in most of the wells within the pilot test area during and post biorecirculation, indicating positive impacts of donor injection.

- DO concentrations of less than 0.5 mg/L are considered optimal for dechlorination (EPA, 1998). In general, the DO results indicate that the pilot test has been successful in creating and sustaining anaerobic conditions during and post biorecirculation in most of the wells within the pilot test area.

- Nitrate concentrations of less than 1 mg/L are considered appropriate for dechlorination (EPA, 1998). Overall, the nitrate results indicate that the pilot test has been successful in creating and sustaining nitrate reducing conditions in most of the wells within the pilot test area during and post biorecirculation.

- Ferrous iron is the product of ferric iron reduction. Ferrous iron concentrations of near or greater than 1 mg/L are considered optimal for dechlorination (EPA, 1998). The results indicate that the pilot test has been successful in sustaining conditions favorable for dechlorination by maintaining ferrous iron concentrations near or greater than 1 mg/L in most of the wells within the pilot test area during and post biorecirculation.

- Optimal dechlorination rates are supported by sulfate concentrations of less than 20 mg/L (EPA 1998). Overall, reduction of sulfate to near or below detection limit levels in most of the monitoring wells during and post biorecirculation indicates establishment of sulfate reducing conditions within the pilot test area.

- Methane provides an indication of conditions most conducive to complete reductive dechlorination of TCE and 1,1-DCE to ethene, with concentrations above 500 µg/L considered optimal for dechlorination (EPA, 1998). In general, the results indicate that the biorecirculation has been successful in creating and sustaining methanogenic conditions in most of the wells within the pilot test area during and post biorecirculation.

In summary, as of September 2009 (approximately 14 months after completion of biorecirculation), the redox conditions are still predominantly conducive for reductive dechlorination within the B-sand of the pilot test area as evidenced by ORP values (near or below -100 mV), elevated ferrous iron concentrations (near or >1 mg/L except for AW0074UB), sulfate concentrations near or below detection limit, and elevated concentrations of methane (>500 µg/L except AW0074UB). Well AW0073C, the C-Sand performance monitoring well, showed methanogenic conditions during biorecirculation, but conditions appear to have changed to iron-reducing post biorecirculation. Iron reducing conditions are also present at the former upgradient well AW0055UB post biorecirculation with sulfate concentrations close to baseline levels in September 2009.

4.3.2 Biological Activity Indicators

Tables 7 and 8 present the pH and alkalinity values, respectively, for the pilot test WDR wells. Noteworthy observations include:

- Except as noted below, pH levels were not observed to be impacted in any of the monitoring wells by whey injections and have remained near or greater than six during and post biorecirculation. This indicates that optimal pH levels have been maintained within the pilot test area suggesting that the aquifer has sufficient self-buffering capacity.

  pH levels decreased below five at injection wells AW0067UB and AW0066UB in June and September 2008, but have since then rebounded to the optimal range.

- The elevated alkalinity values in the key performance monitoring wells compared to no change in alkalinity values at wells downgradient of the pilot test area indicate presence of biological activity during and post biorecirculation within the pilot area.

4.4 Dechlorinating Bacteria

Table 10 presents the qPCR data for the DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA for the pilot test WDR wells. Appendix A presents the qPCR trends over time for the key pilot test wells. Noteworthy observations include:

- The whey injections not only successfully stimulated indigenous dechlorinating bacteria but also stimulated the desired functional genes (including *bvcA* and *vcrA* which are responsible for VC degradation to ethene) within the pilot test area. Significant increases in numbers of DHC and functional genes *tceA* and *bvcA* (4 to 10 orders of magnitude increase [$>10^6$ gene copies/L to $>10^9$ gene copies/L]) were observed in the key performance monitoring wells including the former upgradient well (AW0055UB) and the C-sand crossgradient well (AW0073C) in the six months following the start of biorecirculation. The B-sand crossgradient wells (AW0065UB, AW0064UB, and AW0074UB) showed an increase in numbers of DHC and functional genes *tceA* and *bvcA* by five to nine orders of magnitude ($>10^7$ gene copies/L to $>10^9$ gene copies/L) in eight to nine months following the start of biorecirculation.

- In spite of the significant increase in the *bvcA* gene of DHC bacteria, VC reduction was not observed, until after the *vcrA* gene was detected in large quantities ($>10^5$ gene copies/L to $>10^{10}$ gene copies/L) starting with the August 2008 event. This increase in numbers of the *vcrA* gene was accompanied by large increases in ethene concentrations around September 2008 in the key performance monitoring wells within the pilot test area.

- DHC bacteria exhibiting the *vcrA* gene were critical for achieving complete reductive dechlorination in the pilot test area with the stimulation process occurring eight to ten months since the start of the biorecirculation. The latest

(September 2009) data suggest that the DHC bacteria are continuing to actively degrade the VOCs even after 14 months following the completion of biorecirculation. It should be noted that the stimulated DHC bacteria will only survive as long as there is electron donor within the treatment area.

The above results demonstrated that TCE and 1,1-DCE was converted to ethene with biostimulation of indigenous bacteria and as such added bioaugmentation was not required to achieve the objectives of this study. As a result, the planned bioaugmentation using Shaw SDC-9™ culture was not performed during the pilot test.

4.5 Key Chlorinated VOCs

Molar concentrations of key chlorinated VOCs (CVOCs or chlorinated ethenes) consisting of TCE, 1,1-DCE, cis-1,2-DCE, and VC were used to evaluate mass balance (1 mole of DCE is produced from reductive dechlorination of 1 mole of TCE, 1 mole of VC is produced from 1 mole of DCE, and so on) and conversion to the desired biodegradation end product, ethene. Mass concentrations of CVOCs and ethene were used to evaluate concentration trends in the WDR wells.

The CVOC data for the pilot test WDR wells is presented in Table 11. The ethene concentrations for the pilot test WDR wells to date are shown in Table 9. Appendix A presents the mass and molar CVOC and ethene concentration trends over time for the key pilot test wells. Noteworthy observations include:

- Injection wells AW0067UB and AW0066UB showed almost complete removal of CVOC concentrations as of September 2009, which indicates high effectiveness of the pilot test even after 14 months following the completion of biorecirculation.

- Key performance monitoring wells located downgradient of the injection wells (EWB002, AW0077UB, AW0076UB, and AW0075UB) showed significant conversion of TCE and 1,1-DCE to ethene. In the 21 months since the start of biorecirculation (14 months following completion of biorecirculation), approximately 94 percent removal of the CVOCs (average mass removal on a molar basis) has been achieved in these wells, located approximately up to 100 feet downgradient of the injection wells and the extent of CVOC removal in proportion to their distances from the injection wells, as expected.

- The performance monitoring wells located crossgradient of the injection wells AW0065UB, AW0064UB, AW0074UB, and AW0073C (C-Sand) also showed substantial conversion of TCE and 1,1-DCE to ethene. Approximately 66 percent removal of CVOCs (average mass removal on a molar basis) has been achieved in three of these performance monitoring wells (AW0065UB, AW0064UB, and AW0073C), located approximately up to 100 feet crossgradient of the injection wells and the extent of CVOC removal generally in proportion to their distances from the injection wells.

- Based on the results observed at the C-Sand performance monitoring well AW0073C, the pilot test in the B-sand has resulted in a significant reduction of the CVOC concentrations in the C-Sand at least in the vicinity of this well.

- Data from the former upgradient WDR well AW0055UB (approximately 70 feet upgradient of the injection wells), which was reclassified as one of the performance monitoring wells (Group B1) (LARWQCB, 2008b), indicates that some reductive dechlorination has occurred in this well as a result of the biorecirculation based on reduction in VC concentrations since September 2008 along with sustained levels of ethene. However, conditions conducive for reductive dechlorination may be declining in this well based on decreasing ethene concentrations since December 2008.

- The current upgradient well (Well MWB006) does not appear to show effects from the pilot test.

- The wells downgradient of the pilot test area TMW_07 and WCC_12S showed no measurable differences in pre-injection (baseline) and post-injection water quality data (Table 11), indicating no migration of biodegradation products from the pilot test area.

Figure 5 shows the interpreted extent of the distribution of total CVOCs based on pre-injection data (2007 Baseline Sampling), while Figure 6 shows the same based on post injection data (September 2009). Comparison of these two figures indicate that the pilot test has achieved significant reduction of the CVOCs in the treatment area at least 100 feet downgradient and crossgradient of the injection wells and most likely in the primary treatment area extending approximately 300 feet (from the vicinity of the injections wells to the extraction well EWB001), and approximately 70 feet upgradient of the injection wells.

4.6 Other VOCs of Interest

Table 11 also presents the concentrations of other key VOCs, acetone, MEK, and toluene, which have been historically detected at the Site in elevated concentrations. Appendix A presents the concentration trends over time for the key pilot test wells.

The data to date indicate that degradation of acetone and MEK, and toluene to a lesser extent, has occurred in the pilot test treatment zone (except at wells AW0064UB and AW0074UB) as a result of the amendment injections. The decreasing trend in acetone and MEK concentrations appears to be generally sustained in the pilot test wells (except for AW0064UB and AW0074UB), while toluene concentrations appears to be either decreasing at a slower rate or seems to have stabilized.

Section 5
Conclusions and Future Activities

5.1 Conclusions

The results of the Former Building 1/36 WDR sampling data through September 2009 indicate that the pilot test has significantly stimulated degradation of the key VOCs at the Site. Significant to almost complete reductive dechlorination of TCE and 1,1-DCE to ethene was achieved in most of the wells within the pilot test area, and stimulated biodegradation appears to be ongoing with no active donor injections in the treatment area since July 2008.

The following are some of the key conclusions developed from the pilot test data:

- In the 21 months since the start of biorecirculation (14 months following completion of biorecirculation), evidence of significant degradation of the key CVOCs has been observed in: four downgradient performance monitoring wells EWB002, AW0077UB, AW0076UB, and AW0075UB (approximately 94 percent average mass removal on a molar basis); and three crossgradient performance monitoring wells, AW0065UB, AW0064UB, and C-Sand Well AW0073C (approximately 66 percent average mass removal on a molar basis).

- Based on the above CVOC data and the concentrations of the electron donor, degradation products, and redox conditions observed in the pilot test wells, good electron donor distribution was achieved at least 100 feet downgradient of the injection wells and most likely in the primary treatment area extending approximately 300 feet (from the vicinity of the injections wells to the extraction well EWB001). Based on the CVOC results and electron donor distribution observed in some of the crossgradient performance monitoring wells, temporary groundwater extraction and recirculation using well WCC_06S appears to have enhanced electron donor distribution at least 100 feet in the crossgradient direction. Furthermore some reductive dechlorination from the pilot test operations has also been observed in the former upgradient (and current performance monitoring) well, AW0055UB, which is located approximately 70 feet upgradient of the injection wells.

- Reductive dechlorination of TCE and 1,1-DCE was achieved as a function of electron donor distribution. In addition, TCE and DCE degradation began almost immediately following the start of biorecirculation and whey injection.

- Redox conditions conducive for dechlorination remain strongly reducing in the treatment area, approximately 14 months after completion of biorecirculation.

- Indigenous DHC dechlorinating bacteria exhibiting the *bvcA* and *vcrA* genes (responsible for VC degradation) along with the *tceA* gene were successfully stimulated (increased by 5 to 7 orders of magnitude) by the whey injections to achieve complete dechlorination to ethene. The *vcrA* gene appeared to be the most

critical for achieving complete reductive dechlorination in the pilot test area. The process of VC reduction and corresponding ethene production took approximately eight to ten months following the start of biorecirculation (around September 2008) and was also accompanied by the growth of indigenous dechlorinating bacteria exhibiting the vcrA gene.

- Based on the results observed at the C-Sand performance monitoring well AW0073C, the pilot test in the B-sand has resulted in a significant reduction in the CVOC concentrations in the C-Sand at least in the vicinity of this well.

- The amendment injections have a resulted in a significant decrease in the concentrations of acetone and MEK, and to a lesser extent toluene, in the pilot test treatment area (except for wells AW0064UB and AW0074UB). The decreasing trend in acetone and MEK concentrations appears to be generally sustained in the pilot test wells (except for AW0064UB and AW0074UB), while toluene concentrations appears to be either decreasing at a slower rate or seems to have stabilized.

- A comparison of the pre-injection (baseline) and post-injection data for the WDR monitoring wells also indicates that, with the exception of desired increases in TOC, VFAs (which are intermediate degradation products), dissolved gases (methane – indicating good redox conditions and ethene – the final degradation product), and DHC bacteria, the amendment injections have not adversely impacted water quality beneath the pilot test area. These desired increases in TOC, VFAs, dissolved gases, and DHC bacteria are localized and will not impact existing or prospective future uses of groundwater. These degradation products are expected to decrease over time to pre-injection levels, provided no other bioremediation activities are implemented.

- Comparison of pre-injection (baseline) and post-injection groundwater quality data to date from wells located downgradient (TWM_07 and WCC_12S) of the pilot test area indicate that no degradation products associated with biorecirculation activities are migrating away from the test area. Similarly, the current upgradient well (well MWB006) does not appear to show effects from the pilot test.

- As experienced before and during biorecirculation, extracting any significant amount of groundwater from the B-Sand at the Site proved to be challenging at best. This is mainly due to the predominantly fine-grained materials present in the Site subsurface and the varying nature of these materials across the Site, which will have an impact on the design and placement of any future extraction wells.

- Significant and recurring biofouling of the wells and pipeline were observed during the pilot test implementations. Although mitigation measures to address biofouling were successful in the short-term, it did not prevent the biofouling from reappearing in the system during the pilot test. As a result, implementation

of periodic biofouling mitigation measures (and associated costs and system downtime) along with any appropriate wellhead designs to minimize biofouling, need to be a continued integral part of any future bioremediation activities at the Site.

- Persistent groundwater mounding observed in the pilot test treatment area is believed to be most likely associated with the presence of significant quantities of biomass created by the biorecirculation, especially near the injection wells, creating an apparent mound.

In summary, in the 21 months since the start and 14 months since the completion of the biorecirculation, the pilot test has met the main objective of verifying the effectiveness of biorecirculation to reduce VOC concentrations and mass within the Bellflower Aquitard beneath the Site by achieving significant VOC mass removal in several wells within the treatment zone. Strongly reducing conditions and indigenous dechlorinating bacteria within the treatment zone will facilitate continued contaminant mass removal to the extent that electron donor is present in concentrations to allow the survival of the dechlorinating bacteria.

In the addition, the pilot test has also met the specific objectives outlined in Section 1.2 as described below:

- Initiated active VOC mass reduction in the B-Sand underneath the Site, as documented in this section and Section 4.

- Obtained information on the rate of VOC biodegradation as evidenced by TCE and DCE degradation which began almost immediately following the start of biorecirculation, while VC reduction and corresponding ethene production took approximately eight to ten months following the start of biorecirculation.

- Information on amendment fate and transport characteristics in the B-Sand was obtained based on the observed conversion of whey to intermediate degradation products (VFAs) and the extent of distribution and longevity of donor (TOC) and VFAs noted in the pilot test area.

- Appropriate design parameters, including not only donor specifications (injection volumes, concentrations, frequency, and delivery methods) and proper, extraction/injection well flowrates and spacing but also information regarding potential operational issues (i.e. biofouling, groundwater extraction limitations), was obtained, which can be used to support potential future expansion of the biorecirculation, as appropriate.

5.2 Future Activities

Remaining activities planned or anticipated for the next year include:

- Although the WDR monitoring as specified in the MRP has been completed, monitoring of some of the key pilot test wells will continue under the site-wide groundwater monitoring program to provide ongoing evaluation of the bioremediation and other related data, as needed. These results will be reported in the appropriate site-wide groundwater monitoring reports submitted in May and November of each year.

- Based on the results of continued monitoring, additional biorecirculation activities may be considered at the Site in the future. Prior to implementation of such activities, a workplan addendum or similar document will be submitted to the LARWQCB for approval along with requests for necessary WDR Permit and MRP modifications.

Section 6
References

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Section 7
List of Tables

(36 pages to follow)

Table 1
WDR Groundwater Monitoring Well Completion Details
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Water Bearing Unit	Easting[1,3]	Northing[1,3]	Reference Elevation (feet amsl)[2]	Boring Total Depth (feet)	Screen Depth Interval (feet)	Depth to Top of Filter Pack (feet)	Casing Diameter (inches)	Casing Type	Slot Size (inches)	Drilled Date
Former Building 1/36 Area											
Extraction Well											
EWB001	B-Sand	6,470,381	1,769,604	49.14	90	59.2 - 89.2	56	6	Sch 80 PVC	0.02	11/09/06
Injection Wells (Group A)											
AW0064UB	B-Sand	6,470,346	1,769,801	53.28	92	68.5 - 88.5	66	2	Sch 40 PVC	0.02	06/21/05
AW0065UB	B-Sand	6,470,316	1,769,802	53.64	92	68.5 - 88.5	66	2	Sch 40 PVC	0.02	06/16/05
AW0066UB	B-Sand	6,470,286	1,769,802	53.98	91	69.5 - 89.5	67	2	Sch 40 PVC	0.02	06/14/05
AW0067UB	B-Sand	6,470,261	1,769,810	54.01	91	70 - 90	67	2	Sch 40 PVC	0.02	06/08/05
Performance Monitoring Wells (Group B)											
EWB002	B-Sand	6,470,279	1,769,773	53.74	90	60 - 90	56	6	Sch 80 PVC	0.02	06/13/07
AW0074UB	B-Sand	6,470,365	1,769,759	52.73	91	70 - 90	67	2	Sch 40 PVC	0.02	06/09/05
AW0075UB	B-Sand	6,470,332	1,769,740	53.23	93	69 - 89	66	2	Sch 40 PVC	0.02	06/08/05
AW0076UB	B-Sand	6,470,302	1,769,740	53.69	92	69 - 89	66	2	Sch 40 PVC	0.02	06/08/05
AW0077UB	B-Sand	6,470,254	1,769,763	53.96	86	70.5 - 85.5	69	2	Sch 40 PVC	0.02	08/19/04
WCC_06S[4]	B-Sand	6,470,336	1,769,734	52.52	91	60 - 90	54	4	Sch 40 PVC	0.01	09/22/89
AW0073C	C-Sand	6,470,329	1,769,765	53.42	117	96 - 116	93	2	Sch 40 PVC	0.02	06/09/05
AW0055UB[5]	B-Sand	6,470,304	1,769,863	53.54	92	69 - 89	65	2	Sch 40 PVC	0.02	06/21/05
Downgradient Wells (Group C)											
WCC_12S	B-Sand	6,470,506	1,769,496	51.32	92	60 - 90	55	4	Sch 40 PVC	0.01	09/17/90
TMW_7	B-Sand	6,470,318	1,769,483	52.52	91	65 - 85	63	2	Sch 40 PVC	0.01	06/29/98
Upgradient Wells (Group D)											
MWB006[5]	B-Sand	6,470,248	1,770,058	53.90	93	65 - 90	63	2	Sch 40 PVC	0.02	11/28/05

Notes:

(1) California State Plane North American Datum of 83 (NAD 83), Zone 5, Feet

(2) feet amsl = feet above mean sea level. Elevations based on North American Vertical Datum of 1988 (NAVD 88)

(3) Coordinates were slightly revised based on additional survey done in November 2006

(4) WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit

(5) AW0055UB was replaced by MWB006 as the Group D well and added as a Group B1 well per the August 2008 MRP.

- = Unknown

AVOCET ENVIRONMENTAL, INC.

Table 2A
Amendment Injection Monthly Summary - Pilot Biorecirculation Test
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Month	Total Water Recirculated (gal)	Total Whey Injected		
		(dry lbs)	(gallons)	(% wt)
December 2007	123,000	231	11,534	0.2%
January 2008	132,000	4,007	13,812	3.5%
February 2008	108,000	1,550	6,838	2.7%
March 2008	36,000	1,989	8,302	2.9%
April 2008	169,000	3,901	13,933	3.4%
May 2008	119,000	1,566	7,410	2.5%
June 2008	96,000	3,219	13,528	2.9%
July 2008	98,000	2,157	8,621	3.0%
TOTAL	**881,000**	**18,621**	**83,978**	**2.7%**

CDM

Table 2B
Amendment Injection Daily Summary - Pilot Biorecirculation Test
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Date	Total Amendment Quantity (Injections performed only in Wells AW0066UB and AW0067UB) [1]		
	Electron Donor (Whey) (dry quantity - lb)	**Electron Donor Solution** (gallons)	**Bioaugmentation Culture** (liters)
3rd and 4th Quarter 2007			
12/20/07	85	5,600	0
12/21/07	146	5,934	0
SUBTOTAL	**231**	**11,534**	**0**
1st Quarter 2008			
01/07/08	176	761	0
01/08/08	468	1,579	0
01/10/08	614	1,982	0
01/15/08	644	1,995	0
01/16/08	644	1,896	0
01/22/08	293	1,339	0
01/23/08	322	1,185	0
01/29/08	205	711	0
01/30/08	322	1,352	0
01/31/08	322	1,012	0
02/01/08	205	1,290	0
02/06/08	88	429	0
02/07/08	263	1,628	0
02/26/08	380	1,391	0
02/27/08	293	1,022	0
02/28/08	322	1,078	0
03/26/08	59	326	0
03/27/08	585	2,921	0
03/28/08	643.5	2,378	0
03/31/08	702	2,677	0
SUBTOTAL	**7,547**	**28,952**	**0**

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Table 2B
Amendment Injection Daily Summary - Pilot Biorecirculation Test
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Date	Total Amendment Quantity (Injections performed only in Wells AW0066UB and AW0067UB) [1]		
	Electron Donor (Whey) (dry quantity - lb)	**Electron Donor Solution** (gallons)	**Bioaugmentation Culture** (liters)
2nd Quarter 2008			
04/01/08	145	681	0
04/04/08	464	2,141	0
04/07/08	551	2447	0
04/08/08	638	1478	0
04/09/08	870	1527	0
04/10/08	508	1790	0
04/17/08	29	310	0
04/18/08	261	1917	0
04/24/08	174	658	0
04/29/08	87	424	0
04/30/08	174	560	0
05/07/08	406	1674	0
05/08/08	348	1477	0
05/27/08	145	488	0
05/28/08	319	2163	0
05/29/08	116	619	0
05/30/08	232	989	0
06/03/08	435	1785	0
06/04/08	348	1438	0
06/06/08	522	2160	0
06/10/08	435	1889	0
06/12/08	493	2095	0
06/13/08	319	1237	0
06/16/08	319	1351	0
06/19/08	348	1573	0
SUBTOTAL	**8,686**	**34,871**	**0**

CDM

Table 2B
Amendment Injection Daily Summary - Pilot Biorecirculation Test
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Date	Total Amendment Quantity (Injections performed only in Wells AW0066UB and AW0067UB) [1]		
	Electron Donor (Whey) (dry quantity - lb)	**Electron Donor Solution** (gallons)	**Bioaugmentation Culture** (liters)
3rd Quarter 2008			
07/02/08	174	762	0
07/03/08	348	1401	0
07/09/08	232	928	0
07/10/08	319	1277	0
07/11/08	116	472	0
07/15/08	160	623	0
07/17/08	319	1274	0
07/18/08	290	1160	0
07/22/08	87	317	0
07/24/08	10	40	0
07/29/08	58	213	0
07/30/08	29	109	0
07/31/08	15	45	0
SUBTOTAL	**2,157**	**8,621**	**0**
TOTAL Pilot Test	**18,621**	**83,978**	**0**

Notes:
lb = pounds
bgs = below ground surface
(1) Well AW0066UB is screened from 69.5 feet bgs to 89.5 feet bgs and Well AW0067UB is screened from 70 feet bgs to 90 feet bgs.

CDM

Table 3
Summary of WDR Groundwater Monitoring Plan - Pilot Biorecirculation Test

Boeing Former C-6 Facility, Building 1/36
Los Angeles, CA

NOTE: This monitoring plan reflects the MRP in the original WDR permit (August 2007), as modified by the first MRP revision (February 2008) and second and the latest MRP revision (August 2008) of the WDR Permit. Any additional monitoring (either additional analyses, additional wells sampled, and/or additional sampling events) performed and any discrepancies/deviations from the MRP are noted in the individual WDR monitoring reports.

Monitoring Well ID	Baseline Monitoring																Month 1 through Month 6 (January - June 2008)																					
	May 2007 (Round 1)								June-07/Dec-07 [2] (Round 2)								Months 1, 2, 4, and 5										Months 3 and 6											
	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	Inorganics	DHGs	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	Inorganics	DHGs	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs
Extraction Well	**No analysis required per the MRP**																																			
EWB001	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X																				
Injection Well (Group A1)																																				
AW0066UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										X	X	X	X	X	X [3]		X		X
AW0067UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										X	X	X	X	X	X [3]		X		X
Injection Well (Group A2)																																				
AW0064UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										X	X	X	X	X	X [3]		X		X
AW0065UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X										X	X	X	X	X	X [3]		X		X
Performance Monitoring Well (Group B1)																																				
EWB002	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0075UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0076UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0077UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0073C	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
Performance Monitoring Well (Group B2)																																				
WCC_6S [4]	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0074UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
Downgradient Monitoring Well (Group C)																																				
WCC_12S	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X	X [3]	X	X		X
TMW_7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X	X [3]	X	X		X
Upgradient Performance Well (Group D)																																				
AW0055UB	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X											X	X	X	X	X	X [3]	X	X		X

NOTES:

GE = Groundwater Elevation
FP = Field parameters: dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, specific conductance, turbidity, ferrous (II) iron

VOCs = Volatile Organic Compounds

TOC = Total Organic Carbon

VFAs = Volatile Fatty Acids
DHC = Quantitative Polymerase Chain Reaction (qPCR) test for Dehalococcoides bacteria and functional gene analyses for the three reductase (RDase) genes - tceA (TCE RDase), vcrA, and

TDS = Total dissolved solids

Inorganics = alkalinity, anions (sulfate, nitrate, nitrite, and chloride)
DHG = Dissolved Hydrocarbon Gases (ethane, ethene, and methane)

1 - Second baseline sample for EWB002 was conducted in Dec 2007

2 - Since no tracer test was conducted, bromide was not analyzed for any of the samples.

3 - DHC for these wells will be analyzed only for the Month 6 samples.

4 - WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.

Table 3
Summary of WDR Groundwater Monitoring Plan - Pilot Biorecirculation Test

Boeing Former C-6 Facility, Building 1/36
Los Angeles, CA

NOTE: This monitoring plan reflects the MRP in the original WDR permit (August 2007), as modified by the first MRP revision (February 2008) and second and the latest MRP revision (August 2008) of the WDR Permit. Any additional monitoring (either additional analyses, additional wells sampled, and/or additional sampling events) performed and any discrepancies/deviations from the MRP are noted in the individual WDR monitoring reports.

Monitoring Well ID	Month 7 through 12 (July - Dec 2008)																			
	Month 9 (September 2008)										Month 12 (December 2008)									
	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs
Extraction Well																				
EWB001																				
Injection Well (Group A1)																				
AW0066UB	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0067UB	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
Injection Well (Group A2)																				
AW0064UB	X [2]	X [2]	X [2]	X [2]	X [2]			X [2]		X [2]	X [2]	X [2]	X [2]	X [2]	X [2]	X [2]		X [2]		X [2]
AW0065UB	X [2]	X [2]	X [2]	X [2]	X [2]			X [2]		X [2]	X [2]	X [2]	X [2]	X [2]	X [2]	X [2]		X [2]		X [2]
Performance Monitoring Well (Group B1)																				
EWB002	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0075UB	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0076UB	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0077UB	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0073C	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
AW0055UB [3]	X	X	X	X	X			X		X	X	X	X	X	X	X		X		X
Performance Monitoring Well (Group B2)																				
WCC_6S [4]	X [2]	X [2]	X [2]	X [2]	X [2]			X [2]		X [2]	X [2]	X [2]	X [2]	X [2]	X [2]	X [2]		X [2]		X [2]
AW0074UB	X [2]	X [2]	X [2]	X [2]	X [2]			X [2]		X [2]	X [2]	X [2]	X [2]	X [2]	X [2]	X [2]		X [2]		X [2]
Downgradient Monitoring Well (Group C)																				
WCC_12S	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X
TMW_7	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X
Upgradient Performance Well (Group D)																				
MWB006 [3]	X	X	X	X	X		X	X		X	X	X	X	X	X	X	X	X		X

NOTES:

GE = Groundwater Elevation

FP = Field parameters: dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, specific conductance, turbidity, ferrous (II) iron

VOCs = Volatile Organic Compounds

TOC = Total Organic Carbon
VFAs = Volatile Fatty Acids

DHC = Quantitative Polymerase Chain Reaction (qPCR) test for Dehalococcoides bacteria and functional gene analyses for the three reductase (RDase) genes - tceA (TCE RDase), vcrA, and bvcA (BAV1 RDase)
TDS = Total dissolved solids
Inorganics = alkalinity, anions (sulfate, nitrate, nitrite, and chloride)

DHG = Dissolved Hydrocarbon Gases (ethane, ethene, and methane)

1 - Since no tracer test was conducted, bromide was not analyzed for any of the samples.

2 - When donor is introduced in Group A1 AND Group A2 wells, then all Group A2 and B2 wells will also NEED be monitored.

3 - AW0055UB was replaced by MWB006 as the Group D well and added as a Group B1 well per the August 2008 MRP. As a result, AW0055UB and MWB006 met many of the monitoring requirements prior to August 2008, but not all.
4 - WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.

Table 3
Summary of WDR Groundwater Monitoring Plan - Pilot Biorecirculation Test

Boeing Former C-6 Facility, Building 1/36
Los Angeles, CA

NOTE: This monitoring plan reflects the MRP in the original WDR permit (August 2007), as modified by the first MRP revision (February 2008) and second and the latest MRP revision (August 2008) of the WDR Permit. Any additional monitoring (either additional analyses, additional wells sampled, and/or additional sampling events) performed and any discrepancies/deviations from the MRP are noted in the individual WDR monitoring reports.

Monitoring Well ID	Year 2 (2009)																			
	Month 15 (March 2009)										Month 21 (September 2009)									
	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs	GE	FP	VOCs	TOC	VFAs	DHC and Rdase Genes	TDS	Inorganics	Bromide [1]	DHGs
Extraction Well																				
EWB001																				
Injection Well (Group A1)																				
AW0066UB	X	X	X	X						X	X	X	X	X						X
AW0067UB	X	X	X	X						X	X	X	X	X						X
Injection Well (Group A2)																				
AW0064UB	X [2]	X [2]	X [2]	X [2]						X [2]	X [2]	X [2]	X [2]	X [2]						X [2]
AW0065UB	X [2]	X [2]	X [2]	X [2]						X [2]	X [2]	X [2]	X [2]	X [2]						X [2]
Performance Monitoring Well (Group B1)																				
EWB002	X	X	X	X						X	X	X	X	X						X
AW0075UB	X	X	X	X						X	X	X	X	X						X
AW0076UB	X	X	X	X						X	X	X	X	X						X
AW0077UB	X	X	X	X						X	X	X	X	X						X
AW0073C	X	X	X	X						X	X	X	X	X						X
AW0055UB [3]	X	X	X	X						X	X	X	X	X						X
Performance Monitoring Well (Group B2)																				
WCC_6S [4]	X [2]	X [2]	X [2]	X [2]						X [2]	X [2]	X [2]	X [2]	X [2]						X [2]
AW0074UB	X [2]	X [2]	X [2]	X [2]						X [2]	X [2]	X [2]	X [2]	X [2]						X [2]
Downgradient Monitoring Well (Group C)																				
WCC_12S	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X
TMW_7	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X
Upgradient Performance Well (Group D)																				
MWB006 [3]	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X		X

NOTES:

GE = Groundwater Elevation

FP = Field parameters: dissolved oxygen (DO), oxidation-reduction potential (ORP), pH, temperature, specific conductance, turbidity, ferrous (II) iron

VOCs = Volatile Organic Compounds

TOC = Total Organic Carbon
VFAs = Volatile Fatty Acids

DHC = Quantitative Polymerase Chain Reaction (qPCR) test for Dehalococcoides bacteria and functional gene analyses for the three reductase (RDase) genes - tceA (TCE RDase), vcrA, and bvcA (BAV1 RDase)
TDS = Total dissolved solids
Inorganics = alkalinity, anions (sulfate, nitrate, nitrite, and chloride)

DHG = Dissolved Hydrocarbon Gases (ethane, ethene, and methane)

1 - Since no tracer test was conducted, bromide was not analyzed for any of the samples.

2 - When donor is introduced in Group A1 AND Group A2 wells, then all Group A2 and B2 wells will also NEED be monitored.

3 - AW0055UB was replaced by MWB006 as the Group D well and added as a Group B1 well per the August 2008 MRP. As a result, AW0055UB and MWB006 met many of the monitoring requirements prior to August 2008, but not all.
4 - WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.

Table 4
Groundwater Elevations
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Date Measured	Reference Elevation[1] (feet amsl)	Depth to Water (feet)[2]	Groundwater Elevation[1] (feet amsl)	Total Depth of Casing (feet)[2]	PID Measurement (ppmv)
Former Building 1/36 Area						
AW0064UB	05/07/07	53.28	60.48	-7.20	87.70	NM
	06/13/07		60.40	-7.12	87.55	5.3
	01/29/08		60.22	-6.94	87.50	7.8
	02/26/08		60.15	-6.87	87.50	1.0
	03/24/08		58.96	-5.68	86.29	0.0
	04/22/08		58.87	-5.59	NM	0.1
	05/20/08		58.78	-5.50	NM	1.2
	06/17/08		58.85	-5.57	NM	12.5
	09/22/08		58.73	-5.45	NM	0.0
	12/02/08		58.74	-5.46	NM	18.5
	03/09/09		58.64	-5.36	NM	17.2
	09/08/09		58.84	-5.56	NM	7.9
AW0065UB	05/07/07	53.64	60.85	-7.21	89.44	NM
	06/13/07		60.77	-7.13	89.40	0.0
	01/29/08		60.51	-6.87	89.10	5.2
	02/26/08		60.39	-6.75	89.10	1.4
	03/24/08		59.39	-5.75	88.27	21.7
	04/22/08		59.29	-5.65	NM	19.3
	05/20/08		59.19	-5.55	NM	11.2
	06/17/08		59.32	-5.68	NM	11.6
	09/22/08		59.09	-5.45	NM	0.3
	12/02/08		59.17	-5.53	NM	2.4
	03/09/09		58.95	-5.31	NM	0.8
	09/08/09		59.39	-5.75	NM	0.0
AW0066UB	05/07/07	53.98	61.20	-7.22	90.15	NM
	06/13/07		61.12	-7.14	89.80	40.0
	NM[3]		NM	- -	NM	NM
	NM[3]		NM	- -	NM	NM
	03/24/08		59.79	-5.81	89.37	28.2
	04/22/08		59.37	-5.39	NM	27.1
	05/20/08		59.82	-5.84	NM	4.7
	06/17/08		59.98	-6.00	NM	0.3
	09/22/08		59.54	-5.56	NM	0.9
	12/02/08		59.49	-5.51	NM	4.5
	03/09/09		59.22	-5.24	NM	5.1
	09/08/09		59.67	-5.69	NM	0.0
AW0067UB	05/07/07	54.01	61.24	-7.23	88.59	NM
	06/13/07		61.14	-7.13	87.40	18.8
	NM[3]		NM	- -	NM	NM
	NM[3]		NM	- -	NM	NM
	03/24/08		59.81	-5.80	89.52	0.0
	04/22/08		58.94	-4.93	NM	0.0
	05/20/08		59.64	-5.63	NM	0.7
	06/17/08		58.52	-4.51	NM	4.1
	09/22/08		59.52	-5.51	NM	2.0
	12/02/08		59.81	-5.80	NM	4.9
	03/09/09		59.62	-5.61	NM	3.8
	09/08/09		59.92	-5.91	NM	0.0

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Table 4
Groundwater Elevations
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Date Measured	Reference Elevation[1] (feet amsl)	Depth to Water (feet)[2]	Groundwater Elevation[1] (feet amsl)	Total Depth of Casing (feet)[2]	PID Measurement (ppmv)
EWB002	05/07/07	53.74	NM	- -	NM	NM
	06/13/07		60.52	-6.78	94.30	6.7
	01/29/08		60.71	-6.97	94.34	18.7
	02/26/08		60.53	-6.79	89.56	6.2
	03/24/08		60.40	-6.66	89.80	1.7
	04/22/08		60.31	-6.57	NM	4.1
	05/20/08		60.19	-6.45	NM	4.4
	06/17/08		60.28	-6.54	NM	10.2
	08/05/08		60.38	-6.64	NM	0.0
	09/22/08		60.21	-6.47	NM	7.0
	12/02/08		60.32	-6.58	NM	6.7
	03/11/09		60.17	-6.43	NM	NM
	09/08/09		60.40	-6.66	NM	1.7
AW0074UB	05/07/07	52.73	59.95	-7.22	88.55	NM
	06/13/07		59.87	-7.14	88.05	8.1
	01/29/08		59.89	-7.16	88.55	9.2
	02/26/08		59.65	-6.92	88.55	3.8
	03/24/08		59.44	-6.71	87.80	3.0
	04/22/08		59.35	-6.62	NM	2.7
	05/20/08		59.30	-6.57	NM	0.2
	06/17/08		59.34	-6.61	NM	0.9
	08/05/08		59.34	-6.61	NM	31.5
	09/22/08		59.16	-6.43	NM	0.5
	12/02/08		59.22	-6.49	NM	5.5
	03/09/09		59.11	-6.38	NM	0.1
	09/08/09		58.35	-5.62	NM	4.3
AW0075UB	05/07/07	53.23	60.49	-7.26	89.08	NM
	06/13/07		60.40	-7.17	88.40	0.0
	01/29/08		60.30	-7.07	88.72	12.7
	02/26/08		60.16	-6.93	85.70	8.9
	03/24/08		59.99	-6.76	85.34	8.0
	04/22/08		59.87	-6.64	NM	2.9
	05/20/08		59.85	-6.62	NM	2.7
	06/17/08		59.85	-6.62	NM	48.2
	08/05/08		59.83	-6.60	NM	25.0
	09/22/08		59.72	-6.49	NM	48.0
	12/02/08		59.83	-6.60	NM	60.3
	03/09/09		59.66	-6.43	NM	0.1
	09/08/09		59.90	-6.67	NM	0.0
AW0076UB	05/07/07	53.69	61.00	-7.31	88.57	NM
	06/13/07		60.85	-7.16	88.45	1.9
	01/29/08		60.71	-7.02	88.57	25.5
	02/26/08		60.60	-6.91	88.55	8.7
	03/24/08		61.54	-7.85	87.35	0.0
	04/22/08		59.34	-5.65	NM	5.3
	05/20/08		60.27	-6.58	NM	4.9
	06/17/08		60.34	-6.65	NM	21.8
	08/05/08		60.37	-6.68	NM	16.1
	09/22/08		60.20	-6.51	NM	22.6
	12/02/08		60.32	-6.63	NM	25.4
	03/09/09		59.98	-6.29	NM	43.5
	09/08/09		60.38	-6.69	NM	1.7

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Table 4
Groundwater Elevations
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Date Measured	Reference Elevation[1] (feet amsl)	Depth to Water (feet)[2]	Groundwater Elevation[1] (feet amsl)	Total Depth of Casing (feet)[2]	PID Measurement (ppmv)
AW0077UB	05/07/07	53.96	61.23	-7.27	83.45	NM
	06/13/07		61.13	-7.17	82.70	0.0
	01/29/08		61.21	-7.25	83.45	27.0
	02/26/08		60.75	-6.79	88.15	19.8
	03/24/08		60.61	-6.65	74.86	2.7
	04/22/08		60.57	-6.61	NM	24.7
	05/20/08		60.54	-6.58	NM	23.8
	06/17/08		60.53	-6.57	NM	18.4
	08/05/08		60.64	-6.68	NM	0.0
	09/22/08		60.38	-6.42	NM	0.7
	12/02/08		60.62	-6.66	NM	1.7
	03/09/09		60.26	-6.30	NM	34.2
	09/08/09		60.61	-6.65	NM	0.4
WCC_06S	05/07/07	52.70	59.97	-7.27	84.83	NM
	06/13/07		59.85	-7.15	84.90	2.3
	01/29/08		59.79	-7.09	85.05	0.0
	02/26/08		59.62	-6.92	85.05	0.0
	03/24/08		59.46	-6.76	88.25	0.4
	04/22/08		59.39	-6.69	NM	0.2
	08/05/08		59.11	-6.41	NM	0.0
	09/22/08		58.85	-6.15	NM	8.5
	12/02/08	52.52	59.06	-6.54	NM	3.9
	03/09/09	52.52	60.05	-7.53	NM	1.0
	09/08/09		59.17	-6.65	NM	0.0
AW0073C	05/07/07	53.42	60.57	-7.15	117.50	NM
	06/13/07		60.56	-7.14	117.47	3.5
	01/29/08		60.55	-7.13	117.50	9.5
	02/26/08		60.32	-6.90	117.60	2.8
	03/24/08		60.12	-6.70	117.01	1.2
	04/22/08		60.04	-6.62	NM	2.2
	05/20/08		60.09	-6.67	NM	2.1
	06/17/08		60.04	-6.62	NM	17.2
	08/05/08		60.05	-6.63	NM	0.0
	09/22/08		59.89	-6.47	NM	1.0
	12/02/08		59.87	-6.45	NM	0.3
	03/09/09		59.71	-6.29	NM	1.2
	09/08/09		60.17	-6.75	NM	0.0
WCC_12S	05/07/07	51.32	58.69	-7.37	91.77	NM
	06/13/07		58.57	-7.25	91.30	0.0
	09/21/07		58.60	-7.28	NM	NM
	03/24/08		58.18	-6.86	91.80	0.0
	06/17/08		58.07	-6.75	NM	0.4
	09/22/08		57.90	-6.58	NM	0.0
	12/02/08		58.01	-6.69	NM	0.7
	03/09/09		57.72	-6.40	NM	0.8
	09/08/09		58.04	-6.72	NM	0.0
TMW_07	05/07/07	53.96	61.43	-7.47	82.60	NM
	06/13/07		61.30	-7.34	82.55	3.4
	03/24/08		60.88	-6.92	82.61	0.0
	06/17/08		60.78	-6.82	NM	0.3
	09/22/08		60.61	-6.65	NM	0.0
	12/02/08		60.77	-6.81	NM	0.2
	03/09/09		60.39	-6.43	NM	4.2
	09/08/09		60.78	-6.82	NM	0.0

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Table 4
Groundwater Elevations
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Date Measured	Reference Elevation[1] (feet amsl)	Depth to Water (feet)[2]	Groundwater Elevation[1] (feet amsl)	Total Depth of Casing (feet)[2]	PID Measurement (ppmv)
AW0055UB	05/07/07	53.54	60.70	-7.16	89.30	NM
	06/13/07		60.65	-7.11	89.30	2.6
	03/24/08		60.18	-6.64	88.45	5.9
	06/17/08		60.03	-6.49	NM	36.7
	08/05/08		60.10	-6.56	NM	9.4
	09/22/08		59.91	-6.37	NM	107
	12/02/08		59.98	-6.44	NM	92
	03/09/09		59.85	-6.31	NM	62.9
	09/08/09		60.09	-6.55	NM	32.2
MWB006	08/05/08	53.90	60.32	-6.42	NM	135
	09/22/08		60.46	-6.56	NM	155
	12/02/08		60.24	-6.34	NM	0.3
	03/09/09		60.05	-6.15	NM	38.0
	09/08/09		62.94	-9.04	NM	13

Notes:
feet amsl = feet above mean sea level (negative value indicates feet below mean sea level)
PID = photoionization detector
ppmv = part per million by volume
NM = not measured (well being used for amendment injection)
(1) Elevations based on North American Vertical Datum of 1988 (NAVD 88)
(2) Feet below top of casing
(3) Not measured;well being used for amendment injection

Table 5
Summary of Volatile Fatty Acids Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Acetic Acid	Butyric Acid	Hexanoic Acid	i-Hexanoic Acid	i-Pentanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
Former Building 1/36 Area												
AW0055UB	B-Sand	05/10/07	Primary	84.1	0.975	NR	NR	NR	1	NR	17.2	NR
	B-Sand	06/20/07	Primary	140	2.8	0.68	<0.1	0.85	9.8	0.68	36	0.82
	B-Sand	03/25/08	Primary	1.5 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07	0.24 M	<0.07 M
	B-Sand	06/18/08	Primary	1.1 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.14 M	<0.07	<0.07 M	<0.07 M
	B-Sand	09/24/08	Primary	15	<0.07	<0.1	<0.1	<0.07	<1	<0.07	1.8	<0.07
	B-Sand	12/02/08	Primary	7.4	0.11 M	<0.1 M	<0.1 M	<0.07 M	<0.1	<0.07 M	0.91 M	<0.07 M
AW0064UB	B-Sand	09/24/08	Primary	290	14	0.69 M	0.51	3.9	<10	3.4 M	51	3.6
	B-Sand	12/02/08	Primary	430	9.9	0.47 M	<0.1 M	3.4 M	13	2.9 M	56	3.9 M
AW0065UB	B-Sand	05/10/07	Primary	426	8.4	NR	NR	NR	1	NR	67.6	NR
	B-Sand	05/10/07	Duplicate	460	8.63	NR	NR	NR	1	NR	68.1	NR
	B-Sand	06/21/07	Primary	340	5.8	0.21	<0.1	2.3	71	0.38	54	1.4
	B-Sand	09/24/08	Primary	1.4 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07 M	<0.07 M	<0.07 M
	B-Sand	12/02/08	Primary	13	<0.07 M	0.32 M	<0.1 M	<0.07 M	1.5	<0.07 M	1.3 M	<0.07 M
AW0066UB	B-Sand	05/10/07	Primary	483	13.6	NR	NR	NR	1	NR	72.9	NR
	B-Sand	06/20/07	Primary	480	22	0.44	<0.1	1.2	15	1.2	61	2
	B-Sand	03/25/08	Primary	440	1,900	680	1.5	270	<10	240	78	190
	B-Sand	06/17/08	Primary	1,400	220	7.6 M	<0.1	12	1,700	31	710	34
	B-Sand	09/24/08	Primary	1,600	670	47	<0.1	260	<100	330	1,300	170
	B-Sand	12/02/08	Primary	2,000	880	68	0.77 M	300	290	380	1,700	210
	B-Sand	03/11/09	Primary	19	0.08	<0.1	<0.1	<0.07	1.4	0.13	6.4	0.29
AW0067UB	B-Sand	05/10/07	Primary	0.19	0.1	NR	NR	NR	0.1	NR	0.016 J	NR
	B-Sand	06/19/07	Primary	5.8	<0.07	<0.1	<0.1	<0.07	<0.1	<0.07	<0.07	<0.07
	B-Sand	03/25/08	Primary	1,200	740	72	2.3	230	70 J	78	420	130
	B-Sand	06/17/08	Primary	470	130	6.2 M	<0.1	4.2	1,200	11	100	12
	B-Sand	09/24/08	Primary	3,000	810	66	<0.1	340	<100	350	2,100	160
	B-Sand	12/02/08	Primary	1,600	540	42	0.52 M	210	<100	240	1,200	140
	B-Sand	03/11/09	Primary	130	58	2.7	0.92	22	12	26	1,900	170
AW0073C	C-Sand	05/10/07	Primary	58.8	3.28	NR	NR	NR	0.1	NR	10.6	NR
	C-Sand	06/20/07	Primary	58	2	0.45	<0.1	1.2	2	0.15	9.9	0.33
	C-Sand	02/26/08	Primary	9.7 M	0.09	<0.1	<0.1	0.19	<0.1 M	<0.07	0.61	0.15
	C-Sand	03/25/08	Primary	35	<0.07 M	0.12 M	<0.1	<0.07 M	<1	<0.07	1.6	<0.07 M
	C-Sand	04/22/08	Primary	5.4 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07 M	<0.07 M	<0.07 M
	C-Sand	05/20/08	Primary	1.3 M	<0.07	0.15	<0.1	<0.07	0.22 M	<0.07	<0.07	<0.07 M
	C-Sand	06/17/08	Primary	2.1 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.43 M	<0.07	<0.07 M	<0.07 M
	C-Sand	09/24/08	Primary	0.08 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.22 M	<0.07 M	<0.07 M	<0.07 M
	C-Sand	12/03/08	Primary	1.5 M	<0.07 M	<0.1 M	<0.1 M	<0.07 M	0.42 M	<0.07 M	<0.07 M	<0.07 M

AVOCET ENVIRONMENTAL, INC.

Table 5
Summary of Volatile Fatty Acids Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Acetic Acid	Butyric Acid	Hexanoic Acid	i-Hexanoic Acid	i-Pentanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
AW0074UB	B-Sand	05/09/07	Primary	<0.1	<0.1	NR	NR	NR	<0.1	NR	<0.1	NR
	B-Sand	06/19/07	Primary	1.5	<0.07	<0.1	<0.1	<0.07	<0.1	<0.07	<0.07	<0.07
	B-Sand	01/29/08	Primary	0.06 J	<0.07	<0.1	<0.1	<0.07		<0.07	<0.07	<0.07 M
	B-Sand	12/02/08	Primary	290	4.8	0.42 M	0.17 M	3.7 M	<10	1.6 M	32	3.4 M
	B-Sand	03/11/09	Primary	330	2.2	0.24	0.17	2.6	13	1.2	15	2.7
AW0075UB	B-Sand	05/09/07	Primary	154	0.2	NR	NR	NR	<2	NR	1.12 J	NR
	B-Sand	06/21/07	Primary	140	1.8	0.42	<0.1	1.7	1.6	0.14	1.4	0.54
	B-Sand	02/26/08	Primary	160	2.5	<0.1	<0.1	1.4	11	0.16	23	1.1
	B-Sand	03/25/08	Primary	180	4.9	<0.1 M	<0.1	1.8 M	<10	0.45	38	1.7 M
	B-Sand	04/22/08	Primary	430	47	0.69 M	0.44	8.2	<10	4	120	7.8
	B-Sand	05/20/08	Primary	430	31	1.7	0.69	7.7	21	8.6	110	4.2 M
	B-Sand	06/18/08	Primary	870	11	1.1 M	0.71	7.6	28	5.7	220	5.7
	B-Sand	09/24/08	Primary	280	9.6	0.48	0.53	2.4	<10	2.2	56	3.1
	B-Sand	12/03/08	Primary	170	2.9	0.57 M	0.34	1.9 M	13	1.4 M	29	2.7 M
AW0076UB	B-Sand	05/09/07	Primary	576	6.97	NR	NR	NR	<1	NR	101	NR
	B-Sand	06/21/07	Primary	450	9.1	0.25	<0.1	2.1	11	0.86	90	2
	B-Sand	02/26/08	Primary	270	25	0.13	<0.1	3.2	8.4 J	1.5	52	3.8
	B-Sand	03/25/08	Primary	360	58	0.34 M	0.33	4.8	<10	2.8	90	5.4
	B-Sand	04/22/08	Primary	550	19	0.9 M	0.49	5.2	<10	3.7 M	140	3.8
	B-Sand	05/20/08	Primary	430	16	1	0.5	5.9	20	3.5	86	3.4 M
	B-Sand	06/18/08	Primary	440	29	3.9 M	0.69	11	12	6.1	110	4.5
	B-Sand	09/24/08	Primary	470	27	2.4	0.9	5.2	<10	5.3	120	5.8
	B-Sand	12/03/08	Primary	350	19	3 M	0.63	3.8 M	14	4.7 M	73	4.5 M
AW0077UB	B-Sand	05/10/07	Primary	333	36.1	NR	NR	NR	1	NR	74.6	NR
	B-Sand	06/20/07	Primary	770	66	7	0.3	6.5	14	6.9	97	9.7
	B-Sand	02/26/08	Primary	82	1.5	<0.1	<0.1	0.38	<1	0.28	2	0.32
	B-Sand	03/25/08	Primary	190	4.3	0.87 M	<0.1	1.3 M	<10	0.38	21	1.6 M
	B-Sand	04/22/08	Primary	220	19	1.7 M	<0.1	1.4	<10	2.9 M	38	1.6
	B-Sand	05/20/08	Primary	320	15	1.4	0.51	4.1	18	3.9	51	3.3 M
	B-Sand	06/18/08	Primary	370	13	0.59 M	0.61	7	14	3.4	71	5.1
	B-Sand	09/24/08	Primary	8.2 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07 M	0.38 M	0.13 M
	B-Sand	12/03/08	Primary	7.7 M	<0.07 M	<0.1 M	<0.1 M	<0.07 M	0.36 M	<0.07 M	<0.07 M	<0.07 M
EWB001	B-Sand	05/08/07	Primary	0.1	0.1	NR	NR	NR	0.1	NR	0.1	NR
	B-Sand	06/18/07	Primary	0.13	<0.07	<0.1	<0.1	<0.07	0.26	<0.07	<0.07	<0.07

AVOCET ENVIRONMENTAL, INC.

Table 5
Summary of Volatile Fatty Acids Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Acetic Acid	Butyric Acid	Hexanoic Acid	i-Hexanoic Acid	i-Pentanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid
EWB002	B-Sand	06/21/07	Primary	210	5.2	0.25	<0.1	0.9	23	0.51	13	0.97
	B-Sand	06/21/07	Duplicate	220	4.8	0.19	<0.1	0.83	18	0.5	13	0.9
	B-Sand	02/26/08	Primary	120	14	0.47	0.28	4.3	12	1.8	34	3
	B-Sand	03/25/08	Primary	200	6.8	0.27 M	<0.1	5.4	<10	2.5	64	4.2
	B-Sand	04/22/08	Primary	380	89	13	0.8	11	<10	14	140	12
	B-Sand	05/20/08	Primary	230	10	1	0.67	7.2	18	3.8	65	4.2
	B-Sand	06/18/08	Primary	160	2.8	0.18 M	0.66	9.5 M	1.6	1.9	65	4.2 M
	B-Sand	09/24/08	Primary	8.2 M	0.38 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07 M	0.41 M	0.14 M
	B-Sand	12/03/08	Primary	0.35 M	<0.07 M	<0.1 M	<0.1 M	<0.07 M	0.35 M	<0.07 M	<0.07 M	<0.07 M
MWB006	B-Sand	08/07/08	Primary	2,000 M	72 M	<1	<1 M	0.45	2.9 M	1.3 M	140 M	4.7 M
	B-Sand	09/24/08	Primary	3,300	50	1.2 M	<0.1	4.5	86 J	1.7	330	5.4
	B-Sand	12/02/08	Primary	760	42	0.99 M	<0.1 M	2.5	17	0.89 M	110	3.1
	B-Sand	03/12/09	Primary	1,300	60	1.1	<0.1	3.0	<100	1.2	150	3.1
	B-Sand	09/10/09	Primary	1,000	43	<1.0	<1.0	3	<1	1.4	130	3.2
TMW_07	B-Sand	05/08/07	Primary	0.1	0.1	NR	NR	NR	0.1	NR	0.1	NR
	B-Sand	06/18/07	Primary	0.18	<0.07	<0.1	<0.1	<0.07	0.23	<0.07	<0.07	0.19
	B-Sand	03/25/08	Primary	0.64 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07	<0.07 M	0.25 M
	B-Sand	06/17/08	Primary	0.11 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.37 M	<0.07	<0.07 M	0.34 M
	B-Sand	09/24/08	Primary	<0.07 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07 M	<0.07 M	0.38 M
	B-Sand	12/02/08	Primary	0.2 M	<0.07 M	0.17 M	<0.1 M	<0.07 M	0.28 M	<0.07 M	<0.07 M	0.43 M
	B-Sand	03/11/09	Primary	0.06 J	<0.07	<0.1	<0.1	<0.07	0.14	<0.07	<0.07	0.23
	B-Sand	09/10/09	Primary	0.019 J	<0.07	<0.1	<0.1	<0.07	<0.1	<0.07	0.04 J	<0.07
WCC_06S	B-Sand	05/08/07	Primary	7.7	0.1	NR	NR	NR	0.1	NR	0.1	NR
	B-Sand	06/19/07	Primary	2.2	<0.07	0.2	<0.1	<0.07	0.11	<0.07	<0.07	<0.07
	B-Sand	01/29/08	Primary	<0.07	<0.07	<0.1	<0.1	<0.07		<0.07	<0.07	<0.07 M
	B-Sand	12/02/08	Primary	0.52 M	<0.07 M	0.33 M	<0.1 M	<0.07 M	0.25 M	<0.07 M	<0.07 M	<0.07 M
WCC_12S	B-Sand	05/09/07	Primary	0.142	<0.1	NR	NR	NR	<0.1	NR	0.014 J	NR
	B-Sand	06/18/07	Primary	<0.07	<0.07	<0.1	<0.1	<0.07	0.18	<0.07	<0.07	0.12
	B-Sand	03/25/08	Primary	0.1 M	<0.07 M	<0.1 M	<0.1	<0.07 M	<0.1 M	<0.07	<0.07 M	0.11 M
	B-Sand	06/17/08	Primary	0.09 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.31 M	<0.07	<0.07 M	<0.07 M
	B-Sand	09/24/08	Primary	0.11 M	<0.07 M	<0.1 M	<0.1	<0.07 M	0.34 M	<0.07 M	<0.07 M	0.13 M
	B-Sand	12/03/08	Primary	1.1 M	<0.07 M	<0.1 M	<0.1 M	<0.07 M	0.27 M	<0.07 M	<0.07 M	<0.07 M
	B-Sand	03/11/09	Primary	0.06 J	<0.07	<0.1	<0.1	<0.07	0.15	<0.07	<0.07	0.08
	B-Sand	09/10/09	Primary	0.045 J	<0.07	<0.1	<0.1	<0.07	<0.1	<0.07	0.14	<0.07

AVOCET ENVIRONMENTAL, INC.

Table 5
Summary of Volatile Fatty Acids Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Acetic Acid	Butyric Acid	Hexanoic Acid	i-Hexanoic Acid	i-Pentanoic Acid	Lactic Acid	Pentanoic Acid	Propionic Acid	Pyruvic Acid

Notes:

Bold indicates detected concentration

M = recovery/RPD poor for MS/MSD, SAMP/DUP

< = not detected at a concentration greater than the laboratory reporting limit indicated

J = Estimated concentration detected below the laboratory reporting limit

NR = not reported. The samples from both the May and June 2007 events were analyzed for the VFAs by Ion Chromatography. However, the analysis for the first round samples, analyzed by Applied Sciences, report only the four main VFAs. Subsequent rounds of VFA analyses were performed by Microseeps, which reports additional 5- and 6-carbon acids that are used for sites using vegetable substrates and organic substrates other than lactic acid.

AVOCET ENVIRONMENTAL, INC.

Table 6
Summary of Total Organic Carbon Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Total Organic Carbon
Former Building 1/36 Area				
AW0055UB	B-Sand	05/10/07	Primary	**76**
	B-Sand	06/20/07	Primary	**170**
	B-Sand	03/25/08	Primary	**3.6**
	B-Sand	06/18/08	Primary	**4.1**
	B-Sand	09/24/08	Primary	**11**
	B-Sand	12/02/08	Primary	**20**
	B-Sand	03/11/09	Primary	**2**
	B-Sand	09/11/09	Primary	**3.4**
AW0064UB	B-Sand	09/24/08	Primary	**240**
	B-Sand	12/02/08	Primary	**380**
	B-Sand	03/12/09	Primary	**28**
	B-Sand	09/10/09	Primary	**230**
AW0065UB	B-Sand	05/10/07	Primary	**480**
	B-Sand	05/10/07	Duplicate	**470**
	B-Sand	06/21/07	Primary	**430**
	B-Sand	09/24/08	Primary	**21**
	B-Sand	12/02/08	Primary	**12**
	B-Sand	03/11/09	Primary	**17**
	B-Sand	09/10/09	Primary	<1
AW0066UB	B-Sand	05/10/07	Primary	**530**
	B-Sand	06/20/07	Primary	**710**
	B-Sand	03/25/08	Primary	**3,300**
	B-Sand	06/17/08	Primary	**2,400**
	B-Sand	09/24/08	Primary	**4,100 P, pH**
	B-Sand	12/02/08	Primary	**3,800**
	B-Sand	03/11/09	Primary	**90**
	B-Sand	09/10/09	Primary	**280**
AW0067UB	B-Sand	05/10/07	Primary	**11**
	B-Sand	06/19/07	Primary	**5.8**
	B-Sand	03/25/08	Primary	**2,200**
	B-Sand	06/17/08	Primary	**1,200**
	B-Sand	09/24/08	Primary	**3,500 P, pH**
	B-Sand	12/02/08	Primary	**3,100**
	B-Sand	03/11/09	Primary	**2,300**
	B-Sand	09/10/09	Primary	**310**
AW0073C	C-Sand	05/10/07	Primary	**59**
	C-Sand	06/20/07	Primary	**150**
	C-Sand	01/29/08	Primary	**16**
	C-Sand	02/26/08	Primary	**11**
	C-Sand	03/25/08	Primary	**29**
	C-Sand	04/22/08	Primary	**5.4**
	C-Sand	05/20/08	Primary	**100**
	C-Sand	06/17/08	Primary	**4.1**
	C-Sand	09/24/08	Primary	<1
	C-Sand	12/03/08	Primary	**1.5**
	C-Sand	03/11/09	Primary	<1.0
	C-Sand	09/11/09	Primary	**0.51 J**

AVOCET ENVIRONMENTAL, INC.

Table 6
Summary of Total Organic Carbon Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Total Organic Carbon
AW0074UB	B-Sand	05/09/07	Primary	**1.9 B**
	B-Sand	06/19/07	Primary	**3.8**
	B-Sand	01/29/08	Primary	**1.6**
	B-Sand	12/02/08	Primary	**250**
	B-Sand	03/11/09	Primary	**17**
	B-Sand	09/11/09	Primary	**120**
AW0075UB	B-Sand	05/09/07	Primary	**84**
	B-Sand	06/21/07	Primary	**87**
	B-Sand	01/30/08	Primary	**120**
	B-Sand	02/26/08	Primary	**150**
	B-Sand	02/26/08	Primary	**150**
	B-Sand	03/25/08	Primary	**210**
	B-Sand	04/22/08	Primary	**440**
	B-Sand	05/20/08	Primary	**400**
	B-Sand	06/18/08	Primary	**430**
	B-Sand	09/24/08	Primary	**250**
	B-Sand	12/03/08	Primary	**150**
	B-Sand	03/11/09	Primary	**29**
	B-Sand	09/11/09	Primary	**20**
AW0076UB	B-Sand	05/09/07	Primary	**540**
	B-Sand	06/21/07	Primary	**630**
	B-Sand	01/30/08	Primary	**550**
	B-Sand	02/26/08	Primary	**380**
	B-Sand	02/26/08	Primary	**380**
	B-Sand	03/25/08	Primary	**480**
	B-Sand	04/22/08	Primary	**440**
	B-Sand	05/20/08	Primary	**470**
	B-Sand	06/18/08	Primary	**450**
	B-Sand	09/24/08	Primary	**480**
	B-Sand	12/03/08	Primary	**280**
	B-Sand	03/11/09	Primary	**82**
	B-Sand	09/11/09	Primary	**9**
AW0077UB	B-Sand	05/10/07	Primary	**660**
	B-Sand	06/20/07	Primary	**670**
	B-Sand	01/30/08	Primary	**150**
	B-Sand	02/26/08	Primary	**71**
	B-Sand	03/25/08	Primary	**150**
	B-Sand	04/22/08	Primary	**280**
	B-Sand	05/20/08	Primary	**350**
	B-Sand	06/18/08	Primary	**300**
	B-Sand	09/24/08	Primary	**37**
	B-Sand	12/03/08	Primary	**46**
	B-Sand	03/11/09	Primary	**35**
	B-Sand	09/11/09	Primary	**32**
EWB001	B-Sand	05/08/07	Primary	**1.2**
	B-Sand	06/18/07	Primary	<1

AVOCET ENVIRONMENTAL, INC.

Table 6
Summary of Total Organic Carbon Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Total Organic Carbon
EWB002	B-Sand	06/21/07	Primary	**230**
	B-Sand	06/21/07	Duplicate	**250**
	B-Sand	12/12/07	Primary	**20**
	B-Sand	01/29/08	Primary	**150**
	B-Sand	02/26/08	Primary	**130**
	B-Sand	03/25/08	Primary	**200**
	B-Sand	04/22/08	Primary	**430**
	B-Sand	05/20/08	Primary	**200**
	B-Sand	06/18/08	Primary	**160**
	B-Sand	09/24/08	Primary	**6.6**
	B-Sand	12/03/08	Primary	**3.1**
	B-Sand	03/11/09	Primary	**3.1**
	B-Sand	09/10/09	Primary	**2.5**
MWB006	B-Sand	08/07/08	Primary	**1,600**
	B-Sand	09/24/08	Primary	**1,600**
	B-Sand	12/02/08	Primary	**1,600**
	B-Sand	03/12/09	Primary	**1,400**
	B-Sand	09/10/09	Primary	**1,400**
TMW_07	B-Sand	05/08/07	Primary	**1.5**
	B-Sand	06/18/07	Primary	<1
	B-Sand	03/25/08	Primary	<1
	B-Sand	06/17/08	Primary	**1.6 A-01**
	B-Sand	09/24/08	Primary	<1
	B-Sand	12/02/08	Primary	**1**
	B-Sand	03/11/09	Primary	<1
	B-Sand	09/10/09	Primary	<1
WCC_06S	B-Sand	05/08/07	Primary	**5.5**
	B-Sand	06/19/07	Primary	**2.5**
	B-Sand	01/29/08	Primary	**1.4**
	B-Sand	12/02/08	Primary	**1.1**
	B-Sand	03/11/09	Primary	<1.0
	B-Sand	09/10/09	Primary	**3.1**
WCC_12S	B-Sand	05/09/07	Primary	**2 B**
	B-Sand	06/18/07	Primary	**1.9**
	B-Sand	09/21/07	Primary	**1.8**
	B-Sand	03/25/08	Primary	**1.4**
	B-Sand	06/17/08	Primary	**3**
	B-Sand	09/24/08	Primary	<1
	B-Sand	12/03/08	Primary	**2.2**
	B-Sand	03/11/09	Primary	**1.3**
	B-Sand	09/10/09	Primary	**2.1**

Notes:
< = not detected at a concentration greater than the laboratory reporting limit indicated
Bold indicates detected concentration
A-01 = Sample can not be homogenized
B = analyte detected in Method Blank
J = estimated value; analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL)
P, pH = sample not preserved in accordance to the referenced analytical method, ph = 3

AVOCET ENVIRONMENTAL, INC.

Table 7
Summary of Field Parameters
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Unit	Monitoring Date	pH	Temperature (°C)	Turbidity (NTU)	Electrical Conductivity (mS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Ferrous Iron (mg/l)
Former Building 1/36 Area									
AW0055UB	B-Sand	05/10/07	6.6	24.8	5.9	2.78	3.5	-134	0
	B-Sand	06/20/07	6.49	23	10.9	2.96	1	123	2
	B-Sand	03/25/08	6.73	22.25	1.11	2.92	0.22	-143	0.91
	B-Sand	06/18/08	6.57	22.25	0.77	3.06	0.16	-120	1.11
	B-Sand	08/06/08	6.51	23.19	0.96	3.17	0.24	-119	1.02
	B-Sand	09/24/08	6.49	22.78	30.5	3.16	0.14	-110	- -
	B-Sand	12/02/08	6.51	21.77	0.52	3.24	0.35	-234	1.12
	B-Sand	03/11/09	6.6	20.96	5.3	3.16	0.31	-215	0.63
	B-Sand	09/11/09	6.7	22.92	6.2	3.22	0.4	-234	0.97
AW0064UB	B-Sand	05/09/07	5.3	23.8	98	2.9	5.9	-117	0.05
	B-Sand	06/20/07	6.62	23.9	32.7	2.27	2.56	128	0.09
	B-Sand	09/24/08	6.67	22.55	207	3.07	0.36	-109	- -
	B-Sand	12/02/08	6.53	22.19	81	3.82	1.59	-101	1.26
	B-Sand	03/12/09	7.52	20.66	48	2.2	0.12	-257	1.9
	B-Sand	09/10/09	6.61	24.01	148	3.53	0.41	-202	1.33
AW0065UB	B-Sand	05/10/07	6.32	22.1	160.8	3.55	2.68	-119	0.08
	B-Sand	06/21/07	6.51	24.3	50.5	3.67	2.19	105	3.3
	B-Sand	09/24/08	6.25	22.71	663	3.49	0.58	-85	- -
	B-Sand	12/02/08	6.5	22.18	1,982	3.49	0.28	-181	1.02
	B-Sand	03/11/09	7.28	22.69	136	2.71	0.06	-203	0.18
	B-Sand	09/10/09	6.46	24.29	155	3.11	0.45	-179	1.65
AW0066UB	B-Sand	05/10/07	5.1	21.4	350	5.8	3.8	-99	0
	B-Sand	06/20/07	6.41	24.8	851	3.87	1.76	110	3.24
	B-Sand	03/25/08	6.24	21.61	692	6.24	0.82	29	0.97
	B-Sand	06/17/08	4.26	24.49	731	3.16	0.22	-166	1.18
	B-Sand	09/24/08	4.83	23.94	779	6.88	4.43	-51	1.25
	B-Sand	12/02/08	6.32	22.2	271	5.39	1.71	-69	1.15
	B-Sand	03/11/09	6.65	21.6	140	3.69	0.09	-213	0.07
	B-Sand	09/10/09	6.87	24.3	182	7.14	0.43	-165	1.06
AW0067UB	B-Sand	05/10/07	5.5	22.9	990	1.5	3.9	97	0
	B-Sand	06/19/07	7	22.8	197	3.34	1	96	0.12
	B-Sand	03/25/08	6.09	21.32	>2,000	5.16	0.29	9	1.49
	B-Sand	06/17/08	4.07	24.49	207	2.53	0.17	-101	1.79
	B-Sand	09/24/08	4.58	23.2	2,000	5.8	0.31	-65	1.48
	B-Sand	12/02/08	5.0	22.8	596	6.08	0.4	-64	1.52
	B-Sand	03/11/09	6.57	21.33	63	6.23	0.06	-242	0.57
	B-Sand	09/10/09	6.91	23.4	71	7.32	0.41	-211.6	0.07
AW0073C	C-Sand	05/10/07	5.4	24.1	75	1.1	3.2	-140	0
	C-Sand	06/20/07	6.96	23.4	124	0.539	0	275	0.21
	C-Sand	01/29/08	7.1	21.59	- -	0.999	0.25	-293	2.7
	C-Sand	02/26/08	7.06	21.52	85.7	0.886	0.23	-285	0.96
	C-Sand	03/25/08	7.14	22.91	328	0.898	0.52	30	1.03
	C-Sand	04/22/08	6.89	22.6	75.2	0.907	0.22	-245	1.11
	C-Sand	05/20/08	7.11	22.17	10.81	0.793	0.13	-274	1.07
	C-Sand	06/17/08	7.09	22.84	16.7	0.809	0.1	-179	1.87
	C-Sand	08/06/08	7.14	23.35	17.3	0.849	0.18	-177	1.99
	C-Sand	09/24/08	7.38	22.99	4.72	0.757	0.18	-138	1.74
	C-Sand	12/03/08	6.95	21.36	560.0	0.891	0.77	-112	1.46
	C-Sand	03/11/09	6.97	19.43	139.0	0.912	1.25	-136	0.76
	C-Sand	09/11/09	7.4	22.22	7.0	0.78	1.41	-26	1.66
AW0074UB	B-Sand	05/09/07	5.3	23.3	120	1.9	4.3	35	0
	B-Sand	06/19/07	6.67	25.3	232	2.61	1.57	11.7	0.08
	B-Sand	01/29/08	6.86	21.9	- -	1.75	0.8	-18	1.1
	B-Sand	08/06/08	6.44	22.64	0.27	2.92	0.52	-112	1.07
	B-Sand	12/02/08	6.49	22.0	0.44	3.01	0.29	-212	1.47
	B-Sand	03/11/09	6.52	21.42	3.6	2.92	0.48	-119	1.37
	B-Sand	09/11/09	6.6	23.02	6.2	2.53	0.53	-158	0.26

AVOCET ENVIRONMENTAL, INC.

Table 7
Summary of Field Parameters
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Unit	Monitoring Date	pH	Temperature (°C)	Turbidity (NTU)	Electrical Conductivity (mS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Ferrous Iron (mg/l)
AW0075UB	B-Sand	05/09/07	5.3	25	990	2.5	6.2	-115	0
	B-Sand	06/21/07	6.58	22.4	132	2.52	0.73	131	3.05
	B-Sand	01/30/08	6.74	21.71	--	2.41	0.13	-244	3.3
	B-Sand	02/26/08	6.64	22.32	21.9	2.47	0.1	-265	1.65
	B-Sand	03/25/08	6.69	22.01	1.9	2.61	0.69	15	1.44
	B-Sand	04/22/08	6.37	22.46	29.7	3.2	0.27	-175	1.37
	B-Sand	05/20/08	6.44	22.08	19.2	3.1	0.21	-185	1.29
	B-Sand	06/18/08	6.44	23.39	16	3.53	0.07	-156	1.49
	B-Sand	08/06/08	6.32	23.4	15.1	3.65	0.23	-121	1.35
	B-Sand	09/24/08	6.54	23.11	3.1	3.06	0.05	-165	1.27
	B-Sand	12/03/08	6.48	22.11	5.4	3.09	0.17	-124	9.92
	B-Sand	03/11/09	0.65	22.22	10.3	2.44	0.38	-132	0.3
	B-Sand	09/11/09	7.62	22.76	4.2	2.32	0.5	-156.9	0.76
AW0076UB	B-Sand	05/09/07	5.3	23.7	48	5.4	6	-119	0.01
	B-Sand	06/21/07	6.54	22.6	106	4.1	1.45	116	3.3
	B-Sand	01/30/08	6.52	21.7	--	3.96	0.12	-195	3.3
	B-Sand	02/26/08	6.61	22.33	169	3.13	0.16	-194	1.36
	B-Sand	03/25/08	6.41	20.21	9.4	3.42	0.52	28	1.42
	B-Sand	04/22/08	6.41	22.11	7.32	3.3	0.31	-169	1.49
	B-Sand	05/20/08	6.52	22.55	3.72	3.62	0.29	-19	1.43
	B-Sand	06/18/08	6.46	23.18	1.27	3.74	0.09	-134	1.62
	B-Sand	08/07/08	6.45	22.98	1.91	3.6	0.41	-133	1.47
	B-Sand	09/24/08	6.75	22.97	3.94	3.78	0.03	-166	1.39
	B-Sand	12/03/08	6.59	21.88	3.8	3.82	0.1	-150	1.14
	B-Sand	03/11/09	6.63	20.5	5.8	3.44	0.5	-139	0.21
	B-Sand	09/11/09	6.7	22.61	7.5	2.78	0.22	-168	1.76
AW0077UB	B-Sand	05/10/07	5.2	25.3	990	3.6	5.2	-144	0
	B-Sand	06/20/07	6.14	25.5	999	4	1.25	157	0.26
	B-Sand	01/30/08	6.53	21.33	--	2.92	0.19	-217	1.66
	B-Sand	02/26/08	6.52	22.24	56.4	2.58	0.25	-229	0.95
	B-Sand	03/25/08	6.82	22.28	85	2.82	0.38	56	0.86
	B-Sand	04/22/08	5.97	21.5	7.07	2.92	0.5	-205	0.72
	B-Sand	05/20/08	6.02	21.62	6.99	2.97	0.34	-238	0.81
	B-Sand	06/18/08	6.26	22.48	8.37	3.21	0.08	-157	2.64
	B-Sand	08/06/08	6.39	23.63	8.5	3.49	0.21	-176	2.49
	B-Sand	09/24/08	6.61	22.72	4.27	3.37	0.05	-193	2.27
	B-Sand	12/03/08	6.5	21.7	11.6	3.57	0.17	-169	0.97
	B-Sand	03/11/09	6.54	19.95	10.2	3.37	0.63	-157	1.37
	B-Sand	09/11/09	6.8	22.74	4.0	3.05	0.25	-199.8	1.09
EWB001	B-Sand	05/08/07	7.4	23.9	54	1.9	2.6	-211	0.37
	B-Sand	06/18/07	7.21	23.7	23.5	1.7	0.03	20	0.03
	B-Sand	12/12/07	7.14	22.4	186.0	0.185	0.8	5	0.02
	B-Sand	03/16/09	7.01	22.67	63	2.38	1.4	32	--
EWB002	B-Sand	06/21/07	6.61	23.3	0.5	2.56	0.92	101	3.3
	B-Sand	12/12/07	6.53	21.88	2	0.335	0.45	-120	1.58
	B-Sand	01/29/08	6.65	21.67	--	2.94	0.3	-252	3.3
	B-Sand	02/26/08	6.59	22.13	1.07	2.44	2.37	-190	1.48
	B-Sand	03/25/08	6.45	21.02	0.2	2.69	0.37	23	1.5
	B-Sand	04/22/08	6.26	21.64	0.32	3.14	0.29	-214	1.42
	B-Sand	05/20/08	6.46	21.94	0.97	3.02	0.19	-217	1.49
	B-Sand	06/18/08	6.43	22.22	2.94	3.21	0.07	-141	3.3
	B-Sand	08/06/08	6.41	23.83	2.01	3.4	0.22	-146	3.17
	B-Sand	09/24/08	6	23.03	2.02	2.99	0.1	-161	3.02
	B-Sand	12/03/08	6.51	22.29	73.1	2.9	0.28	-115	1.83
	B-Sand	03/11/09	6.46	21.05	23.2	2.96	0.48	-105	1.07
	B-Sand	09/10/09	6.71	23.6	31.6	3.0	0.57	-93.6	1.62
MWB006	B-Sand	03/27/08	6.26	23.71	0.9	7.5	0.72	-105	NA
	B-Sand	08/07/08	5.89	24.77	6.75	8.0	0.68	-92	2.87
	B-Sand	09/24/08	6.3	24.78	54.8	7.58	0.14	-94	2.63
	B-Sand	12/02/08	6.12	24.02	31.1	7.56	4.03	-63	2.13
	B-Sand	03/12/09	6.65	22.46	5.13	7.98	0.48	-149	0.85
	B-Sand	09/10/09	5.65	23.81	4.96	7.83	0.45	-161	1.12

Table 7
Summary of Field Parameters
Boeing Former C-6 Facility, Building 1/36
Los Angeles, California

Well I.D.	Unit	Monitoring Date	pH	Temperature (°C)	Turbidity (NTU)	Electrical Conductivity (mS/cm)	Dissolved Oxygen (mg/l)	Oxidation Reduction Potential (mV)	Ferrous Iron (mg/l)
TMW_07	B-Sand	05/08/07	7.4	26.2	130	1.8	7.4	42	0.53
	B-Sand	06/18/07	7.23	24.7	350	1.46	11.37	85	0.45
	B-Sand	03/25/08	7.14	21.74	2.71	1.55	5.07	115	0
	B-Sand	06/17/08	6.97	22.69	0.27	1.6	4.3	47	0
	B-Sand	09/24/08	7.35	22.62	1.54	1.559	6.22	9	0
	B-Sand	12/02/08	7.06	22.12	1.29	1.7	6.71	-43	0.97
	B-Sand	03/11/09	7.09	19.99	11.7	1.66	6.46	23	0.26
	B-Sand	09/10/09	7.1	22.82	53.0	1.66	6.11	39	0.02
WCC_06S	B-Sand	05/08/07	7	25	48	2.9	2.5	-138	3.3
	B-Sand	06/19/07	6.99	23.9	5.1	5.96	1.07	27	0.54
	B-Sand	01/29/08	7.83	20.75	- -	0.138	5.31	79	3.16
	B-Sand	03/26/08	7.3	22.4	9.5	3.31	6.42	76	NM
	B-Sand	08/05/08	5.87	23.79	137	3.83	0.38	-151	1.92
	B-Sand	12/02/08	6.94	22.02	45	3.85	3.17	-172	1.67
	B-Sand	03/11/09	7.72	21.88	5	3.91	8.02	-48	1.52
	B-Sand	09/10/09	7.2	23.39	17	3.66	6.93	12.6	1.03
WCC_12S	B-Sand	05/09/07	5.6	24.5	2	2.2	5.2	-30	0
	B-Sand	06/18/07	7.22	23.6	<10	2.05	9.95	63	0.12
	B-Sand	09/21/07	6.9	24.4	70	2.17	4.43	48	0
	B-Sand	03/25/08	7.25	21.42	1.41	1.71	4.99	51	0.04
	B-Sand	06/17/08	7.03	21.88	1.05	1.81	4.2	129	0.06
	B-Sand	09/24/08	7.36	21.79	1.32	1.73	6.42	104	0.09
	B-Sand	12/03/08	6.96	21.26	6.5	1.81	6.45	87	0.69
	B-Sand	03/11/09	7.04	19.24	1.2	1.79	6.97	120	0.9
	B-Sand	09/10/09	7.15	21.77	2.65	1.69	6.42	31	0.06

Notes:
°C = degrees Celsius
NTU = nephelometric turbidity unit
mS/cm = milliSiemen per centimeter
mg/l = milligram per liter
mV = millivolt
"- -" = not analyzed
NA = Not applicable. Well was not designated a WDR well until August 22, 2008.
NM = This Group B2 well was not monitored under the WDR program.

Table 8
Summary of Inorganic Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Alkalinity	Chloride	Nitrate-NO3	Nitrite-NO2	Sulfate	Total Dissolved Solids
Former Building 1/36 Area									
AW0055UB	B-Sand	05/10/07	Primary	650	580	<0.5	<10 RL1	1.8 B	- -
	B-Sand	06/20/07	Primary	560	670	<2.5 RL1	<2.5 RL1	2.5 B,RL1,J	- -
	B-Sand	03/25/08	Primary	570	670	<0.5	<0.5	28	1,900
	B-Sand	06/18/08	Primary	610	660	<0.5	<0.5	28	2,300
	B-Sand	09/24/08	Primary	610	650	<0.5	<25 RL1	13	- -
	B-Sand	12/02/08	Primary	600	650	<0.5	<10 RL1	22	- -
	B-Sand	09/11/09	Primary	- -	- -	<1 RL3	<1 RL3	29 RL3	- -
AW0064UB	B-Sand	09/24/08	Primary	750	520 MHA	<0.5	<0.5	0.52	- -
	B-Sand	12/02/08	Primary	910	640	<0.5	<10.0 RL1	0.55	- -
	B-Sand	03/12/09	Primary	- -	430	<0.5	<2.5 RL1	1.7	- -
	B-Sand	09/10/09	Primary	- -	- -	<1 RL3	<10 RL3	0.51 RL3,J	- -
AW0065UB	B-Sand	05/10/07	Primary	480	720	<0.5	<10 RL1	<0.5	- -
	B-Sand	05/10/07	Duplicate	460	730	<0.5	<10 RL1	<0.5	- -
	B-Sand	06/21/07	Primary	650	760	<0.5	<0.5	4.1	- -
	B-Sand	09/24/08	Primary	700	350	<0.5	<25 RL1	1.7	- -
	B-Sand	12/02/08	Primary	760	690	<0.5	<10 RL1	0.58	- -
	B-Sand	09/10/09	Primary	- -	- -	<1 RL3	<5 RL3	<1 RL3	- -
AW0066UB	B-Sand	05/10/07	Primary	500	820	<0.5	<10 RL1	<0.5	- -
	B-Sand	06/20/07	Primary	560	890	<2.5 RL1	<2.5 RL1	<2.5 RL1	- -
	B-Sand	03/25/08	Primary	1,600	600	<2.5 RL1	<2.5 RL1	37	- -
	B-Sand	06/17/08	Primary	<2	620	1.1	<10 RL1	31	- -
	B-Sand	09/24/08	Primary	1,800	520	<2.5 RL1	<25 RL1	36	- -
	B-Sand	12/02/08	Primary	2,800	570	<5.0 RL1	<50 RL1	29	- -
	B-Sand	03/11/09	Primary	- -	430	<1.0	<25 RL1	2	- -
	B-Sand	09/10/09	Primary	- -	- -	<3 RL3	<10 RL3	0.54 RL1,J	- -
AW0067UB	B-Sand	05/10/07	Primary	270	290	4.4	<10 RL1	28	- -
	B-Sand	06/19/07	Primary	370	420	1.3	<0.5	40	- -
	B-Sand	03/25/08	Primary	1,400	500	<2.5 RL1	<2.5 RL1	29	- -
	B-Sand	06/17/08	Primary	<2	530	<20 C,RL1	<10 RL1	21	- -
	B-Sand	09/24/08	Primary	1,300	600	<5 RL1	<25 RL1	41	- -
	B-Sand	12/02/08	Primary	2,200	520	<3 RL1	<50 RL1	9	- -
	B-Sand	03/11/09	Primary	- -	150	0 J	<25 RL1	6	- -
	B-Sand	09/10/09	Primary	- -	- -	<2.5 RL3	<10 RL3	0.66 RL1,J	- -
AW0073C	C-Sand	05/10/07	Primary	210	180	<0.5	<10 RL1	24	- -
	C-Sand	06/20/07	Primary	270	210 MHA	<0.5 M2, R	<0.5 M1	7.4	- -
	C-Sand	01/29/08	Primary	240	130	0.32 J	<0.5	9.1	500
	C-Sand	02/26/08	Primary	230	140 M-3	0.39 J	<0.5 M1	9.5	- -
	C-Sand	03/25/08	Primary	250	130	<0.5	<0.5	7.4	- -
	C-Sand	04/22/08	Primary	240	130	<0.5	<0.5	12	- -
	C-Sand	05/20/08	Primary	220	110	<0.5	<0.5	6.8	- -
	C-Sand	06/17/08	Primary	200	130	0.68	<0.5 C	17	- -
	C-Sand	09/24/08	Primary	200	100	<0.5	<0.5	18	- -
	C-Sand	12/03/08	Primary	220	110	<0.5	<0.5	16	- -
	C-Sand	03/11/09	Primary	- -	120	<0.5	<0.5	13	- -
	C-Sand	09/11/09	Primary	- -	- -	<0.5	<0.5	18	- -
AW0074UB	B-Sand	05/09/07	Primary	270	340	<0.5	<10 RL1	21	- -
	B-Sand	06/19/07	Primary	270	350	<0.5	<0.5	23	- -
	B-Sand	01/29/08	Primary	250	380	1.4	<0.5	19	970
	B-Sand	12/02/08	Primary	620	510	1.2	<2.5 RL1	5	- -
	B-Sand	12/02/08	Primary	- -	480	1.6	<10.0 RL1	10	- -
	B-Sand	09/11/09	Primary	- -	- -	0.86	<3 RL3	3	- -
AW0075UB	B-Sand	05/09/07	Primary	460	520	<0.5	<10 RL1	11	- -
	B-Sand	06/21/07	Primary	510	540	<0.5	<0.5	10	- -
	B-Sand	01/30/08	Primary	450	510	<1 RL1	1.4	4	1,700
	B-Sand	02/26/08	Primary	510	530	<1 RL1	<1 RL1	2.4	- -
	B-Sand	03/25/08	Primary	480	560	<0.5	<0.5	3.3	- -
	B-Sand	04/22/08	Primary	730	590	<0.5	<25 RL1	1.1	- -
	B-Sand	05/20/08	Primary	750	550	<0.5	<10 RL1	<0.5	- -
	B-Sand	06/18/08	Primary	900	620	<0.5	<20 RL1	<0.5	- -
	B-Sand	09/24/08	Primary	790	540 MHA	<0.5	<25 RL1	1.1	- -
	B-Sand	12/03/08	Primary	820	470	<0.5	<25 RL1	1.1	- -
	B-Sand	03/11/09	Primary	- -	430	<0.5	<10 RL1	10	- -
	B-Sand	09/11/09	Primary	- -	- -	<0.5	<3 RL3	1	- -

AVOCET ENVIRONMENTAL, INC.

Table 8
Summary of Inorganic Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Alkalinity	Chloride	Nitrate-NO3	Nitrite-NO2	Sulfate	Total Dissolved Solids
AW0076UB	B-Sand	05/09/07	Primary	620	760	<0.5	<10 RL1	<0.5	- -
	B-Sand	06/21/07	Primary	760	810	<0.5	<0.5	<0.5	- -
	B-Sand	01/30/08	Primary	710	820	<1 RL1	3.2	<1 RL1	2,700
	B-Sand	02/26/08	Primary	700	650	<2.5 RL1	<2.5 RL1	<2.5 RL1	- -
	B-Sand	03/25/08	Primary	800	640	<1 RL1	<1 RL1	0.52 RL1, J	- -
	B-Sand	04/22/08	Primary	800	610	<0.5	<25 RL1	0.91	- -
	B-Sand	05/20/08	Primary	820	690	<0.5	<10 RL1	0.41 J	- -
	B-Sand	06/18/08	Primary	1,000	670	<0.5	<20 RL1	<0.5	- -
	B-Sand	09/24/08	Primary	1,100	580	<0.5	<25 RL1	0.52	- -
	B-Sand	12/03/08	Primary	1,100	520	<0.5	<25 RL1	<0.5	- -
	B-Sand	03/11/09	Primary	- -	490	<0.5	<10 RL1	<0.5	- -
	B-Sand	09/11/09	Primary	- -	- -	<1 RL3	<3 RL3	<1 RL3	- -
AW0077UB	B-Sand	05/10/07	Primary	650	640	<2.5 RL1	<2.5 RL1	2.7	- -
	B-Sand	06/20/07	Primary	870	610	<2.5 RL1	<2.5 RL1	<2.5 RL1	- -
	B-Sand	01/30/08	Primary	610	500	<1 RL1	<1 RL1	3.2	1,700
	B-Sand	02/26/08	Primary	610	480	<1 RL1	<1 RL1	0.8 RL1, J	- -
	B-Sand	03/25/08	Primary	620	500	<0.5	<0.5	<0.5	- -
	B-Sand	04/22/08	Primary	700	520	<0.5	<50 RL1	0.96	- -
	B-Sand	05/20/08	Primary	740	540	<0.5	<10 RL1	0.66	- -
	B-Sand	06/18/08	Primary	900	530	<0.5	<10 RL1	<0.5	- -
	B-Sand	09/24/08	Primary	1,200	490	<0.5	<25 RL1	<0.5	- -
	B-Sand	12/03/08	Primary	1,200	450	<0.5	<25 RL1	<0.5	- -
	B-Sand	12/03/08	Primary	- -	460	<0.5	<10 RL1	3.0	- -
	B-Sand	09/11/09	Primary	- -	- -	<1 RL3	<1 RL3	<1 RL3	- -
EWB001	B-Sand	05/08/07	Primary	210	370	7.8	<10 RL1	21	- -
	B-Sand	06/18/07	Primary	190	420	1.2	<0.5	27	- -
EWB002	B-Sand	06/21/07	Primary	450	530	3.4	<0.5	18	- -
	B-Sand	06/21/07	Duplicate	460	530	3.4	<0.5	18	- -
	B-Sand	12/12/07	Primary	550	650	<0.5	1.4	0.35 J	- -
	B-Sand	01/29/08	Primary	550	490	<1 RL1	<1 RL1	0.48 RL1, J	1,700
	B-Sand	02/26/08	Primary	540	500	<1 RL1	<1 RL1	<1 RL1	- -
	B-Sand	03/25/08	Primary	600	490	<0.5	<0.5	0.58	- -
	B-Sand	04/22/08	Primary	860	480	<0.5	<25 RL1	1.5	- -
	B-Sand	05/20/08	Primary	840	520	<0.5	<10 RL1	0.61	- -
	B-Sand	06/18/08	Primary	940	520	<0.5	<20 RL1	0.61	- -
	B-Sand	09/24/08	Primary	920	490	<0.5	<25 RL1	0.37 J	- -
	B-Sand	12/03/08	Primary	730	460	<0.5	<25 RL1	1.2	- -
	B-Sand	03/11/09	Primary	- -	450	<0.5	<10 RL1	0.38 J	- -
	B-Sand	09/10/09	Primary	- -	- -	<1 RL3	<5 RL3	0.43 RL3,J	- -
MWB006	B-Sand	08/07/08	Primary	740	2,200	<10 RL1	<50 RL1	<0.5	5,900
	B-Sand	09/24/08	Primary	780	2,100	<0.5	<25 RL1	<0.5	6,300
	B-Sand	12/02/08	Primary	710	1,900	<1.0 RL1	<50 RL1	<1.0 RL1	6,500
	B-Sand	03/12/09	Primary	- -	2,200	- -	- -	- -	6,500
	B-Sand	09/10/09	Primary	- -	2,600	- -	- -	- -	8,500
TMW_07	B-Sand	05/08/07	Primary	310	230	34	<10 RL1	81	- -
	B-Sand	06/18/07	Primary	330	250	40	<0.5	110	- -
	B-Sand	03/25/08	Primary	350	240 MHA	42	<0.5	100	950
	B-Sand	06/17/08	Primary	350	240	47	<0.5 C	120	930
	B-Sand	09/24/08	Primary	330	220	44	<0.5	110	1,000
	B-Sand	12/02/08	Primary	340	210 MHA	44	<0.5	120	960
	B-Sand	03/11/09	Primary	- -	220	- -	- -	- -	970
	B-Sand	09/10/09	Primary	- -	250	- -	- -	- -	1,000
WCC_06S	B-Sand	05/08/07	Primary	340	590	9.7	<10 RL1	21	- -
	B-Sand	06/19/07	Primary	140	920	7.1	<0.5	43	- -
	B-Sand	01/29/08	Primary	40	8.3	0.59	<0.5	4.4	130
	B-Sand	12/02/08	Primary	170	1,100	41	<10.0 RL1	38	- -
	B-Sand	03/11/09	Primary	- -	1,000	60	<10.0 RL1	42	- -
	B-Sand	09/10/09	Primary	- -	- -	44	<5 RL3	48	- -
WCC_12S	B-Sand	05/09/07	Primary	180	180	22	<10 RL1	480	- -
	B-Sand	06/18/07	Primary	180	380	28	<0.5	440	- -
	B-Sand	09/21/07	Primary	170	340	22	<0.5	310	- -
	B-Sand	03/25/08	Primary	180	220	19	<0.5	410	1,200
	B-Sand	06/17/08	Primary	190	250	20	<0.5 C	440	1,200
	B-Sand	09/24/08	Primary	190	220	18	<0.5	420	1,200
	B-Sand	12/03/08	Primary	190	200	17	<0.5	380	1,200
	B-Sand	03/11/09	Primary	- -	210	- -	- -	- -	1,200
	B-Sand	09/10/09	Primary	- -	170	- -	- -	- -	1,200

Table 8
Summary of Inorganic Analytical Results
(Units are mg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Alkalinity	Chloride	Nitrate-NO3	Nitrite-NO2	Sulfate	Total Dissolved Solids

Notes:
Bold indicates detected concentration
< = Not detected at a concentration greater than the laboratory reporting limit (RL) indicated
- - = not analyzed
B = analyte was detected in the associated Method Blank
J = estimated value; result below RL and above or equal to MDL (method detection limit)
M1 = the MS and/or MSD were above the acceptance limits due to sample matrix interference
M2 = MS/MSD and RPD exceed limits due to matrix interference
M-3 = results exceeded the linear range in the MS/MSD and, therefore, are not available for reporting
MHA = due to high levels of analyte in the sample, the MS/MSD calculation does not provide useful spike recovery information
RL1 = reporting limit raised due to sample matrix effects
RL3 = reporting limit raised due to high concentrations of non-target analytes.
C = Calibration Verification recovery was above the method control limit for analyte; analyte not detected, data not impacted

Table 9
Summary of Dissolved Hydrocarbon Gases Analytical Results
(Units are µg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Ethane	Ethylene	Methane
Former Building 1/36 Area						
AW0055UB	B-Sand	05/10/07	Primary	<2	<3	**1.2**
	B-Sand	06/20/07	Primary	<2	<3	**1.3**
	B-Sand	03/25/08	Primary	<1	**1.8**	**2.8**
	B-Sand	06/18/08	Primary	<1	**1.9**	**1.7**
	B-Sand	08/06/08	Primary	<1	**12**	**170**
	B-Sand	09/24/08	Primary	<1	**630**	**8,200**
	B-Sand	12/02/08	Primary	<1	**1,200**	**11,000**
	B-Sand	09/11/09	Primary	<1	**670**	**8,400**
AW0064UB	B-Sand	09/24/08	Primary	<1	**470**	**8,400**
	B-Sand	12/02/08	Primary	<1	**280**	**3,000**
	B-Sand	03/12/09	Primary	**1 J**	**550**	**13,000**
	B-Sand	09/10/09	Primary	<1	**820**	**7,900**
AW0065UB	B-Sand	05/10/07	Primary	<2	<3	**1.4**
	B-Sand	05/10/07	Duplicate	<2	<3	**1.3**
	B-Sand	06/21/07	Primary	<2	<3	**1.2**
	B-Sand	09/24/08	Primary	<1	**220**	**13,000**
	B-Sand	12/02/08	Primary	**1 J**	**300**	**15,000**
	B-Sand	09/10/09	Primary	**0.8 J**	**320**	**12,000**
AW0066UB	B-Sand	05/10/07	Primary	<2	<3	**3.3**
	B-Sand	06/20/07	Primary	<2	<3	<1
	B-Sand	03/25/08	Primary	**0.73 J**	**0.53 J**	**5,700**
	B-Sand	06/17/08	Primary	<1	**4.2**	**2,700**
	B-Sand	09/24/08	Primary	<1	**26**	**11,000**
	B-Sand	12/02/08	Primary	<1	**20**	**9,400**
	B-Sand	09/10/09	Primary	<1	**4.5**	**2,500**
AW0067UB	B-Sand	05/10/07	Primary	<2	<3	**1.2**
	B-Sand	06/19/07	Primary	<2	<3	**1.4**
	B-Sand	03/25/08	Primary	<1	**0.45 J**	**3,600**
	B-Sand	06/17/08	Primary	<1	**4.9**	**8,800**
	B-Sand	09/24/08	Primary	<1	**55**	**14,000**
	B-Sand	12/02/08	Primary	<1	**47**	**9,100**
	B-Sand	03/11/09	Primary	<1	**53**	**8,800**
	B-Sand	09/10/09	Primary	<1	**13**	**5,100**
AW0073C	C-Sand	05/10/07	Primary	<2	<3	**1.3**
	C-Sand	06/20/07	Primary	<2	<3	**1.6**
	C-Sand	01/29/08	Primary	<2	<3	**140**
	C-Sand	02/26/08	Primary	<2	**1.3 J,B**	**250**
	C-Sand	03/25/08	Primary	<1	**2.7**	**630**
	C-Sand	04/22/08	Primary	<1	**2.9**	**110**
	C-Sand	05/20/08	Primary	<1	**3.7**	**3,600**
	C-Sand	06/17/08	Primary	<1	**4.3**	**560**
	C-Sand	08/06/08	Primary	<1	**7.3**	**310**
	C-Sand	09/24/08	Primary	<1	**6**	**200**
	C-Sand	12/03/08	Primary	<1	**56**	**61**
	C-Sand	03/11/09	Primary	<1	**79**	**65**
	C-Sand	09/11/09	Primary	<1	**10**	**38**

AVOCET ENVIRONMENTAL, INC.

Table 9
Summary of Dissolved Hydrocarbon Gases Analytical Results
(Units are µg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Ethane	Ethylene	Methane
AW0074UB	B-Sand	05/09/07	Primary	<2	<3	1.2
	B-Sand	06/19/07	Primary	<2	<3	1.3
	B-Sand	01/29/08	Primary	<2	<3	12
	B-Sand	08/06/08	Primary	<1	46	5.3
	B-Sand	12/02/08	Primary	1 J	470	240
	B-Sand	03/11/09	Primary	<1	530	370
	B-Sand	09/11/09	Primary	<1	440	120
AW0075UB	B-Sand	05/09/07	Primary	<2	<3	1.1
	B-Sand	06/21/07	Primary	<2	<3	1.1
	B-Sand	01/30/08	Primary	<2	<3	33
	B-Sand	02/26/08	Primary	<2	<3 J,B	4.1
	B-Sand	03/25/08	Primary	<1	5.3	3.9
	B-Sand	04/22/08	Primary	<1	17	17
	B-Sand	05/20/08	Primary	<1	20	2,600
	B-Sand	06/18/08	Primary	<1	14	11,000
	B-Sand	08/06/08	Primary	<1	16	13,000
	B-Sand	09/24/08	Primary	<1	260	4,400
	B-Sand	12/03/08	Primary	<1	350	6,200
	B-Sand	03/11/09	Primary	<1	220	5,200
	B-Sand	09/11/09	Primary	<1	440	10,000
AW0076UB	B-Sand	05/09/07	Primary	<2	<3	1.4
	B-Sand	06/21/07	Primary	<2	<3	1.2
	B-Sand	01/30/08	Primary	<2	30	2.8
	B-Sand	02/26/08	Primary	0.51 J,B	57	120
	B-Sand	03/25/08	Primary	<1	85	550
	B-Sand	04/22/08	Primary	<1	57	540
	B-Sand	05/20/08	Primary	<1	56	3,000
	B-Sand	06/18/08	Primary	<1	42	4,200
	B-Sand	08/07/08	Primary	<1	170	8,100
	B-Sand	09/24/08	Primary	<1	130	11,000
	B-Sand	12/03/08	Primary	<1	320	12,000
	B-Sand	03/11/09	Primary	1 J	330	11,000
	B-Sand	09/11/09	Primary	2	260	13,000
AW0077UB	B-Sand	05/10/07	Primary	<2	<3	850
	B-Sand	06/20/07	Primary	<2	<3	1,200
	B-Sand	01/30/08	Primary	<2	61	1,600
	B-Sand	02/26/08	Primary	<2	87	1,100
	B-Sand	03/25/08	Primary	<1	270	5,000
	B-Sand	04/22/08	Primary	<1	96	8,000
	B-Sand	05/20/08	Primary	<1	120	10,000
	B-Sand	06/18/08	Primary	<1	89	13,000
	B-Sand	08/06/08	Primary	<1	240	12,000
	B-Sand	09/24/08	Primary	<1	270	11,000
	B-Sand	12/03/08	Primary	<1	260	8,000
	B-Sand	03/11/09	Primary	1 J	240	8,000
	B-Sand	09/11/09	Primary	<1	100	6,700
EWB001	B-Sand	05/08/07	Primary	<2	<3	12
	B-Sand	06/18/07	Primary	<2	<3	9.4

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Table 9
Summary of Dissolved Hydrocarbon Gases Analytical Results
(Units are µg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Ethane	Ethylene	Methane
EWB002	B-Sand	06/21/07	Primary	<2	<3	**2.3**
	B-Sand	06/21/07	Duplicate	<2	<3	**2.3**
	B-Sand	12/12/07	Primary	<2	**10**	**540**
	B-Sand	01/29/08	Primary	<2	**7.5**	**570**
	B-Sand	02/26/08	Primary	<2	**28**	**1,400**
	B-Sand	03/25/08	Primary	<1	**39**	**3,500**
	B-Sand	04/22/08	Primary	<1	**18**	**9,400**
	B-Sand	05/20/08	Primary	<1	**14**	**12,000**
	B-Sand	06/18/08	Primary	<1	**40**	**14,000**
	B-Sand	08/06/08	Primary	<1	**75**	**10,000**
	B-Sand	09/24/08	Primary	**0.53 J**	**170**	**9,300**
	B-Sand	12/03/08	Primary	<1.0	**180**	**5,800**
	B-Sand	03/11/09	Primary	**0.6 J**	**260**	**11,000**
	B-Sand	09/10/09	Primary	<1	**190**	**13,000**
MWB006	B-Sand	08/07/08	Primary	<1	**130**	**58**
	B-Sand	09/24/08	Primary	**0.64 J**	**160**	**150**
	B-Sand	12/02/08	Primary	**30**	<1	**30**
	B-Sand	03/12/09	Primary	<1	**160**	**220**
	B-Sand	09/10/09	Primary	<1	**230**	**360**
TMW_07	B-Sand	05/08/07	Primary	<2	<3	<1
	B-Sand	06/18/07	Primary	<2	<3	<1
	B-Sand	03/25/08	Primary	<1	**0.41 J**	**0.47 J**
	B-Sand	06/17/08	Primary	<1	<1	**0.46 J,B**
	B-Sand	09/24/08	Primary	<1	<1	<1
	B-Sand	12/02/08	Primary	<1	<1	<1
	B-Sand	03/11/09	Primary	<1	<1	<1
	B-Sand	09/10/09	Primary	<1	<1	<1
WCC_06S	B-Sand	05/08/07	Primary	<2	<3	**2.7**
	B-Sand	06/19/07	Primary	<2	<3	**1.5**
	B-Sand	01/29/08	Primary	<2	<3	<1
	B-Sand	08/05/08	Primary	**1.1**	**35**	**1,700**
	B-Sand	12/02/08	Primary	<1	<1	**0.52 J**
	B-Sand	03/11/09	Primary	<1	<1	**0.48 J**
	B-Sand	09/10/09	Primary	<1	<1	**5.7**
WCC_12S	B-Sand	05/09/07	Primary	<2	<3	**1.4**
	B-Sand	06/18/07	Primary	<2	<3	<1
	B-Sand	09/21/07	Primary	<0.002	<0.003	<0.001
	B-Sand	03/25/08	Primary	<1	<1	**1.2**
	B-Sand	06/17/08	Primary	<1	<1	**0.98 J,B**
	B-Sand	09/24/08	Primary	<1	<1	**6.2**
	B-Sand	12/03/08	Primary	<1	<1	**0.39 J**
	B-Sand	09/21/07	Primary	**2**	**3**	**1.0**
	B-Sand	03/11/09	Primary	<1	<1	<1.0
	B-Sand	09/10/09	Primary	<1	<1	<1

Notes:

< = not detected at a concentration greater than the laboratory reporting limit indicated

Bold indicates detected concentration

J = estimated value; analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL)

B = analyte detected in Method Blank

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Table 10
Summary of Dehalococcoides Bacteria and Functional Gene Analytical Results
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Dehalococcoides 16S rDNA	Dehalococcoides tceA	Dehalococcoides bvcA	Dehalococcoides vcrA
Former Building 1/36 Area							
AW0055UB	B-Sand	05/10/07	Primary	ND	ND	ND	ND
	B-Sand	06/20/07	Primary	ND	ND	8.6E+02 ± 6.76E+02 J	ND
	B-Sand	06/18/08	Primary	2.31E+08 ± 1.14E+07	2.21E+08 ± 2.02E+07	3.41E+06 ± 4.00E+05	ND
	B-Sand	12/02/08	Primary	4.11E+08 ± 3.78E+07	9.52E+08 ± 4.40E+07	2.1E+06 ± 3.52E+05	1.6E+05 ± 2.70E+04
	B-Sand	03/11/09	Primary	7.29E+07 ± 1.27E+07	2.34E+08 ± 1.98E+07	1.29E+06 ± 2.60E+05	1.10E+04* ± 2.27E+03
AW0064UB	B-Sand	05/09/07	Primary	ND	ND	ND	ND
	B-Sand	06/20/07	Primary	ND	ND	ND	ND
	B-Sand	12/02/08	Primary	6.89E+08 ± 2.84E+07	1.36E+09 ± 1.43E+07	2.0E+07 ± 2.42E+06	6.0E+08 ± 2.00E+07
	B-Sand	03/12/09	Primary	1.39E+08 ± 1.38E+07	3.65E+08 ± 4.54E+07	2.98E+07 ± 1.94E+06	2.70E+06 ± 2.93E+05
AW0065UB	B-Sand	05/10/07	Primary	ND	ND	ND	ND
	B-Sand	05/10/07	Duplicate	ND	ND	ND	ND
	B-Sand	06/21/07	Primary	ND	ND	ND	ND
	B-Sand	12/02/08	Primary	7.45E+09 ± 3.24E+08	1.91E+09 ± 1.10E+09	2.7E+07 ± 2.83E+06	1.2E+10 ± 2.30E+09
	B-Sand	03/11/09	Primary	1.59E+09 ± 1.65E+08	1.24E+09 ± 8.77E+07	1.62E+08 ± 2.06E+07	1.98E+08 ± 1.83E+07
AW0066UB	B-Sand	05/10/07	Primary	ND	ND	1.8E+05 ± 3.69E+04	ND
	B-Sand	06/20/07	Primary	ND	ND	ND	ND
	B-Sand	06/17/08	Primary	9.71E+06 ± 1.42E+06	2.25E+06 ± 2.64E+05	1.37E+06 ± 3.03E+04	ND
	B-Sand	12/02/08	Primary	7.78E+06 ± 2.77E+05	1.82E+07 ± 9.19E+05	ND	ND
AW0067UB	B-Sand	05/10/07	Primary	ND	ND	ND	ND
	B-Sand	06/19/07	Primary	ND	ND	ND	ND
	B-Sand	06/17/08	Primary	1.35E+07 ± 1.93E+06	1.32E+06 ± 2.43E+05	1.60E+06 ± 1.05E+05	ND
	B-Sand	12/02/08	Primary	1.22E+06 ± 1.52E+05	2.78E+06 ± 2.17E+05	ND	ND
AW0073C	C-Sand	05/10/07	Primary	ND	ND	ND	ND
	C-Sand	06/20/07	Primary	ND	ND	ND	ND
	C-Sand	01/29/08	Primary	5.58E+07 ± 1.11E+07	ND	5.2E+07 ± 2.92E+06	ND
	C-Sand	03/25/08	Primary	1.26E+08 ± 1.86E+07	2.83E+04 ± 1.24E+04 J	1.69E+07 ± 1.69E+06	ND
	C-Sand	05/20/08	Primary	2.52E+08 ± 1.52E+07	7.65E+07 ± 1.63E+06	3.2E+07 ± 5.76E+06	ND
	C-Sand	06/17/08	Primary	3.01E+08 ± 4.53E+07	6.46E+07 ± 3.42E+06	4.98E+07 ± 6.08E+04	ND
	C-Sand	12/03/08	Primary	9.34E+07 ± 7.81E+06	2.85E+07 ± 1.93E+06	9.5E+06 ± 1.88E+06	8.9E+07 ± 1.61E+07
	C-Sand	03/11/09	Primary	1.23E+08 ± 2.16E+07	3.97E+07 ± 3.62E+06	1.08E+08 ± 8.78E+06	1.19E+07 ± 1.16E+06
AW0074UB	B-Sand	05/09/07	Primary	ND	ND	ND	2.4E+02 ± 1.64E+02 J
	B-Sand	06/19/07	Primary	3.56E+03 ± 4.61E+03 J	ND	2.50E+02 ± 9.40E+01 J	ND
	B-Sand	01/29/08	Primary	9.46E+02 ± 4.53E+02 J	ND	1.7E+03 ± 4.31E+02 J	ND
	B-Sand	12/02/08	Primary	4.80E+09 ± 1.47E+08	8.27E+09 ± 4.58E+08	2.4E+08 ± 2.15E+07	2.2E+09 ± 1.43E+08
	B-Sand	03/11/09	Primary	4.31E+08 ± 1.80E+07	9.09E+08 ± 9.77E+07	1.42E+08 ± 6.73E+06	2.83E+07 ± 1.05E+06
AW0075UB	B-Sand	05/09/07	Primary	ND	ND	ND	5.6E+02 ± 2.47E+02 J
	B-Sand	06/21/07	Primary	ND	ND	ND	ND
	B-Sand	01/30/08	Primary	1.11E+08 ± 8.41E+07	ND	1.2E+08 ± 4.10E+06	ND
	B-Sand	03/25/08	Primary	2.95E+08 ± 1.94E+07	3.37E+06 ± 6.45E+05	4.23E+07 ± 1.42E+06	ND
	B-Sand	05/20/08	Primary	6.33E+08 ± 9.42E+06	2.5872E+08 ± 2.01E+07	8.0E+07 ± 8.32E+06	ND
	B-Sand	06/18/08	Primary	1.47E+09 ± 1.97E+08	8.86E+08 ± 7.39E+07	2.14E+08 ± 3.11E+07	ND
	B-Sand	12/03/08	Primary	5.66E+08 ± 7.15E+07	6.73E+08 ± 4.44E+07	3.5E+07 ± 4.84E+06	8.5E+08 ± 1.13E+08
	B-Sand	03/11/09	Primary	2.77E+08 ± 2.78E+07	4.05E+08 ± 2.72E+07	2.37E+07 ± 4.26E+06	2.69E+07 ± 1.82E+06
AW0076UB	B-Sand	05/09/07	Primary	ND	ND	ND	ND
	B-Sand	06/21/07	Primary	ND	ND	2.7E+02 ± 1.53E+02 J	ND
	B-Sand	01/30/08	Primary	4.31E+08 ± 1.20E+07	ND	4.4E+08 ± 8.08E+07	ND
	B-Sand	03/25/08	Primary	4.30E+08 ± 2.77E+07	3.46E+07 ± 3.58E+06	8.45E+07 ± 1.21E+07	ND
	B-Sand	05/20/08	Primary	2.61E+08 ± 1.10E+07	7.6572E+07 ± 2.92E+06	3.4E+07 ± 5.16E+06	ND
	B-Sand	06/18/08	Primary	6.65E+08 ± 4.61E+07	4.87E+08 ± 3.59E+07	3.41E+07 ± 5.33E+06	ND
	B-Sand	12/03/08	Primary	1.30E+09 ± 9.66E+07	4.18E+08 ± 8.45E+06	6.2E+06 ± 3.55E+05	4.0E+09 ± 2.66E+08
AW0077UB	B-Sand	05/10/07	Primary	ND	ND	ND	3.9E+02 ± 1.76E+02 J
	B-Sand	06/20/07	Primary	ND	ND	ND	ND
	B-Sand	01/30/08	Primary	8.22E+08 ± 1.65E+08	ND	7.2E+09 ± 7.25E+08	ND
	B-Sand	03/25/08	Primary	1.74E+09 ± 2.94E+08	7.25E+03 ± 6.24E+03 J	1.83E+08 ± 2.93E+07	ND
	B-Sand	05/20/08	Primary	2.73E+09 ± 1.81E+08	3.9096E+08 ± 3.88E+07	4.7E+08 ± 7.21E+07	ND
	B-Sand	06/18/08	Primary	1.96E+09 ± 1.31E+08	5.59E+08 ± 7.11E+07	2.26E+08 ± 3.82E+07	ND
	B-Sand	12/03/08	Primary	7.87E+08 ± 4.68E+07	1.91E+07 ± 1.41E+06	1.1E+08 ± 1.55E+07	9.0E+08 ± 8.77E+07
EWB001	B-Sand	05/09/07	Primary	6.05E+01 ± 4.36E+01 J	ND	ND	ND
	B-Sand	06/19/07	Primary	ND	ND	3.10E+04 ± 1.46E+04 J	ND
EWB002	B-Sand	06/21/07	Primary	ND	ND	1.2E+03 ± 8.04E+02 J	ND
	B-Sand	06/21/07	Duplicate	ND	ND	ND	ND
	B-Sand	01/29/08	Primary	4.14E+09 ± 2.43E+08	5.14E+09 ± 6.85E+08	2.5E+08 ± 1.51E+07	ND
	B-Sand	03/25/08	Primary	1.13E+09 ± 1.58E+08	1.18E+09 ± 1.47E+08	4.70E+06 ± 1.36E+05	ND
	B-Sand	05/20/08	Primary	2.77E+08 ± 4.65E+07	1.6010E+08 ± 8.96E+06	1.5E+07 ± 1.91E+06	ND
	B-Sand	06/18/08	Primary	7.71E+08 ± 8.47E+07	6.58E+08 ± 3.01E+07	1.54E+07 ± 2.05E+06	1.51E+06 ± 2.45E+05
	B-Sand	12/03/08	Primary	1.44E+08 ± 2.35E+07	1.63E+08 ± 6.03E+06	2.9E+04* ± 2.29E+04	1.7E+08 ± 6.78E+06
EWC001	B-Sand	06/19/07	Primary	ND	ND	7.00E+03 ± 7.53E+03 J	ND
MWB006	B-Sand	12/02/08	Primary	1.60E+09 ± 8.26E+07	3.49E+09 ± 6.77E+08	ND	ND
	B-Sand	03/12/09	Primary	1.27E+09 ± 2.29E+07	5.29E+09 ± 3.41E+08	ND	ND
	B-Sand	09/10/09	Primary	8.67E+07 ± 1.59E+07	1.72E+08 ± 1.68E+07	ND	ND

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Table 10
Summary of Dehalococcoides Bacteria and Functional Gene Analytical Results
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	Dehalococcoides 16S rDNA	Dehalococcoides tceA	Dehalococcoides bvcA	Dehalococcoides vcrA
TMW_07	B-Sand	05/09/07	Primary	ND	ND	ND	ND
	B-Sand	06/19/07	Primary	ND	ND	ND	ND
	B-Sand	06/17/08	Primary	ND	ND	**6.46E+01 ± 4.14E+01**	ND
	B-Sand	12/02/08	Primary	ND	ND	ND	ND
	B-Sand	03/11/09	Primary	ND	ND	ND	ND
	B-Sand	09/10/09	Primary	**9.32E+01* ± 1.96E+01**	**6.58E+01* ± 2.53E+01**	ND	ND
WCC_06S	B-Sand	05/09/07	Primary	ND	ND	ND	ND
	B-Sand	06/19/07	Primary	**6.48E+06 ± 1.84E+06**	ND	**1.1E+06 ± 8.52E+04**	ND
	B-Sand	01/29/08	Primary	**9.27E+04 ± 1.67E+04**	ND	**5.6E+04 ± 4.84E+03**	ND
	B-Sand	12/02/08	Primary	**6.49E+05 ± 8.16E+03**	**1.82E+06 ± 2.72E+05**	ND	ND
	B-Sand	03/11/09	Primary	**2.54E+04* ± 4.30E+02**	**4.42E+04* ± 2.06E+04**	**1.02E+04* ± 7.87E+03**	**1.88E+03* ± 4.52E+02**
WCC_12S	B-Sand	05/09/07	Primary	ND	ND	ND	ND
	B-Sand	06/19/07	Primary	**7.78E+03 ± 4.86E+03 J**	ND	**1.10E+03 ± 5.76E+02 J**	ND
	B-Sand	09/21/07	Primary	**1.90E+04 ± 1.37E+03**	ND	**1.8E+04 ± 2.95E+03**	ND
	B-Sand	06/17/08	Primary	ND	ND	ND	ND
	B-Sand	12/03/08	Primary	ND	ND	ND	ND
	B-Sand	03/11/09	Primary	ND	ND	ND	ND
	B-Sand	09/10/09	Primary	**2.02E+02* ± 7.06E+01**	**1.60E+01* ± 8.56E+00**	ND	ND

Notes:
All results are reported in gene copies/liter groundwater
ND = not detected at a concentration greater than the laboratory reporting limit of 50 gene copies/microliter (µl) of DNA extraction
J = value presented is below the reporting limit (50 gene copies/µl of DNA extraction).
* = indicates that the value presented is below the reporting limit.

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Table 11
Summary of Prevalent Volatile Organic Compounds Analytical Results
(Units are µg/l)
Boeing Former C-6 Facility
Los Angeles, California

Well I.D.	Category	Sample Date	Sample Type	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Bromodichloromethane	Carbon Disulfide	Chloroethane	Chloroform
Former Building 1/36 Area																
AW0055UB	B-Sand	05/10/07	Primary	60	44	440	8,800	140	6,900	3,000	1,200	47	<25	<25	<50	51
	B-Sand	06/20/07	Primary	96	63	510	9,500	130	38,000	9,300	3,800	62	<20	<20	<40	51
	B-Sand	03/25/08	Primary	14 J	48	550	19,000	99	<200	<200	<400	67	<40	<40	<80	52
	B-Sand	06/18/08	Primary	15	50	520	12,000	94	<50	<50	<100	59	<10	<10	<20	66
	B-Sand	06/18/08	Duplicate	14 J	46	530	12,000	92	<200	<200	<400	58	<40	<40	<80	64
	B-Sand	08/06/08	Primary	12 J	45	580	19,000	88	<200	<200	<400	63	<40	<40	<80	30 J
	B-Sand	09/24/08	Primary	6.2 J	54	650	8,900	98	<100	230	<200	70	<20	<20	<40	50
	B-Sand	12/02/08	Primary	7 J	51	660	9,000	110	1,900	540	250	84	<20	<20	<40	27
	B-Sand	03/11/09	Primary	<40	47	620	15,000	92	<200	<200	<400	74	<40	<40	<80	18 J
	B-Sand	09/11/09	Primary	<25	47	640	9,900	83	<120	<120	<250	77	<25	<25	13 J	<25
AW0064UB	B-Sand	09/24/08	Primary	<40	33 J	230	730	47	13,000	4,300	5,100	34	<40	<40	43 J	<40
	B-Sand	12/02/08	Primary	22 J	<50	620	870	160	35,000	16,000	11,000	66	<50	<50	48 J	20 J
	B-Sand	03/12/09	Primary	<10	14	95	1,800	24	2,000	1,100	740	20	<10	<10	10 J	5 J
	B-Sand	09/10/09	Primary	<50	40 J	320	260	76	3,000	11,000	5,600	65	<50	<50	190	<50.0
AW0065UB	B-Sand	05/10/07	Primary	1,500	110 J	690	6,300	290	80,000	51,000	9,900	76 J	<200	<200	<400	<200
	B-Sand	05/10/07	Duplicate	1,600	120 J	770	7,300	320	100,000	61,000	12,000	82 J	<250	<250	<500	<250
	B-Sand	06/21/07	Primary	850	100 J	690	8,200	200	66,000	35,000	9,400	92 J	<200	<200	<400	<200
	B-Sand	09/24/08	Primary	<5	<5	3.4 J	<5	11	29	42	45 J	15	<5	<5	44	<5
	B-Sand	12/02/08	Primary	<5	<5	4.8 J	170	16	<25	<25	<50	28	<5	<5	90	<5
	B-Sand	03/11/09	Primary	<4	<4	42.0	51	21	43	89	37 J	29	<4	<4	120	<4
	B-Sand	09/10/09	Primary	<3	2 J	15	67	13	<12	<12	<25	38	<3	<3	160	<3
AW0066UB	B-Sand	05/10/07	Primary	<250	110 J	1,100	7,300	340	120,000	16,000	18,000	<250	<250	<250	<500	<250
	B-Sand	06/20/07	Primary	<1,000	<1,000	1,200	11,000	<500	190,000	20,000	26,000	<1,000	<1,000	<1,000	<2,000	<1,000
	B-Sand	03/25/08	Primary	<1	<1	6.9	140 A-01,P6	1.1	140	12	210	1.3	<1	3.8	<2	36
	B-Sand	06/17/08	Primary	25	19	100	1,500	28	120	590	450	19	<2	12 P-HS	1.1 J	5.8
	B-Sand	09/24/08	Primary	<1	0.51 J	6.2	120	2.8	220	25	130	4.9	<1	<1	9.4	<1
	B-Sand	12/02/08	Primary	<1	<1	2.1	28	1.7	140	24	81	5.2	<1	0.52 J	11	<1
	B-Sand	03/11/09	Primary	<1	<1	<1.0	3	<0.5	22	48	19	3.8	<1	5.3	8	<1
	B-Sand	09/10/09	Primary	<1	<1	1 J	<1.0	<0.5	<5	21	7 J	3.7	<1	<1.0	8.4	<1
AW0067UB	B-Sand	05/10/07	Primary	26	<20	220	3,200	27	1,700	<100	1,200	8.2 J	<20	<20	<40	22
	B-Sand	06/19/07	Primary	20	19	400	7,200	44	<120	17	<250	25	<1	<1	0.57 J	42
	B-Sand	03/25/08	Primary	<4	<4	9.3	440	<2	270	<20	110	1.6 J	<4	4.2	4.9 J	17
	B-Sand	06/17/08	Primary	20	20	100	920	29	200	650	550	18	<4	15	5.1 J	5.8
	B-Sand	09/24/08	Primary	<2	<2	3.8	88	3	390	180	160	7	<2	<2	18	<2
	B-Sand	09/24/08	Duplicate	<2	<2	4.1	87	3	360	180	130	6.8	<2	<2	17	<2
	B-Sand	12/02/08	Primary	<1	<1	2.4	41	2.3	350	170	120	6.6	<1	<1	16	<1
	B-Sand	03/11/09	Primary	<1	<1	0.91 J	13	1.0	930	180	310	6.0	<1	3	14	<1
	B-Sand	09/10/09	Primary	<1	<1	1.2	<1	<1	<5	110 MH	6 J	4	<1	1.4	6	<1
AW0073C	C-Sand	05/10/07	Primary	730	38 J	120	4,200	96	5,700	12,000	480	33 J	<40	<40	<80	<40
	C-Sand	06/20/07	Primary	600	42 J	120	4,600	64	9,700	25,000	720	34 J	<50	<50	<100	<50
	C-Sand	01/29/08	Primary	180	16 J	96	2,800	33	<100	2,900	110 J	23	<20	<20	<40	6.6 J
	C-Sand	02/26/08	Primary	110	11	84	2,000	32	<50	1,300	140	16	<10	<10	<20	3.9 J
	C-Sand	03/25/08	Primary	53	7 J	73	520	22	720	300	490	13	<20	<20	<40	<20
	C-Sand	04/22/08	Primary	40	8 J	71	520	19	<50	<50	60 J	11	<10	<10	<20	<10
	C-Sand	05/20/08	Primary	5.6	1.2 J	39	81	12	<10	170	<20	4	<2	<2	2.8 J	<2
	C-Sand	06/17/08	Primary	9.4	3	38	110	7.3	<10	<10	<20	3.9	<2	<2	<4	<2
	C-Sand	08/06/08	Primary	5.2	3.4	47	56	8.4	<10	<10	<20	4.4	<2	<2	<4	<2
	C-Sand	09/24/08	Primary	2.8	1.6	35	20	5.3	<5	<5	<10	1.6	<1	<1	<2	<1
	C-Sand	12/03/08	Primary	6.2 J	6 J	52	14	10	<50	<50	<100	6.2	<10	<10	<20	<10
	C-Sand	03/11/09	Primary	5.9	4	61	18	9	<5	<5	<10	3.8	<1	<1	<2	<1
	C-Sand	09/11/09	Primary	2.1	2	46	28	7	<5	<5	<10	1.9	<1	<1	<2	<1
	C-Sand	09/11/09	Duplicate	2.3	2	50	30	7.7	<5	<5	<10	2.0	<1	<1	<2	<1
AW0074UB	B-Sand	05/09/07	Primary	1.5	0.66 J	75	2,900	2.3	140	<5	53	20	<1	<1	<2	3
	B-Sand	06/19/07	Primary	4.5	2	81	3,400	3.8	<200	14	<400	24	<1	0.99 J	<2	3.6
	B-Sand	01/29/08	Primary	3.1 J	3.4 J	72	4,300	7.3	<50	<50	45 J	22	<10	<10	<20	4 J
	B-Sand	08/06/08	Primary	150	60	400	4,700	85	10,000	21,000	4,400	76	<40	<40	<80	25 J
	B-Sand	12/02/08	Primary	96	78	490	1,700	120	14,000	25,000	3,900	76	<50	<50	<100	25 J
	B-Sand	03/11/09	Primary	53	61	420	1,800	91	16,000	22,000	4,800	61	<40	<40	<80	20 J
	B-Sand	09/11/09	Primary	110	63	560	960	52	2,200	5,500	3,500	120	<25	<25	<50	17 J

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Well I.D.	Category	Sample Date	Sample Type	Chloromethane	cis-1,2-Dichloroethene	Di-isopropyl Ether (DIPE)	Ethylbenzene	m,p-Xylenes	Methylene chloride	o-Xylene	Tetrachloroethene	Tetrahydrofuran (THF)	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride
Former Building 1/36 Area																	
AW0055UB	B-Sand	05/10/07	Primary	<50	10,000	- -	<25	- -	<25	- -	<25	1,200	1,400	270	1,600	<50	40
	B-Sand	06/20/07	Primary	<40	12,000	- -	<20	- -	<20	- -	<20	3,400	3,000	360	1,500	<40	67
	B-Sand	03/25/08	Primary	<80	9,100	14 J	<40	<40	<40	<20	<40	<400	120	480	11,000	<80	160
	B-Sand	06/18/08	Primary	<20	7,100	12 J	3.1 J	17	<10	5.6	<10	40 J	150	390	11,000	<20	250
	B-Sand	06/18/08	Duplicate	<80	6,800	11 J	<40	<40	<40	<20	<40	<400	150	380	11,000	<80	250
	B-Sand	08/06/08	Primary	<80	9,600	12 J	<40	<40	<40 B	<20	<40	<400	150	440	9,100	<80	930
	B-Sand	09/24/08	Primary	<40	10,000	13 J	<20	19 J	<20	<10	<20	79 J	1,200	480	6,500	<40	9,100
	B-Sand	12/02/08	Primary	<40	9,300	27 J	5 J	30	<20	9.8 J	<20	<200	1,600	500	7,200	<40	9,100
	B-Sand	03/11/09	Primary	<80	10,000	11 J	<40	<40	<40	<20.0	<40	<400	1,000	490	12,000	<80	3,500
	B-Sand	09/11/09	Primary	<50	8,800	14 J	<25	27	<25	9 J	<25	<250	1,700	470	6,500	<50	3,700
AW0064UB	B-Sand	09/24/08	Primary	<80	1,100	<80	<40	34 J	<40	12 J	<40	290 J	4,300	140	<40	<80	2,700
	B-Sand	12/02/08	Primary	<100	690	<100	17 J	96	<50	44	<50	<500	14,000	250	<50	<100	10,000
	B-Sand	03/12/09	Primary	<20	2,500	<20	<10	11	<10	5 J	<10	<100	1,800	75	26	<20	1,600
	B-Sand	09/10/09	Primary	<100	250	<100	14 J	73	<40 P-HS	32.0	<50	<500	19,000	200	<50	<100	2,000
AW0065UB	B-Sand	05/10/07	Primary	<400	6,200	- -	<200	- -	<200	- -	<200	2,300	14,000	310	<200	<400	<100
	B-Sand	05/10/07	Duplicate	<500	7,000	- -	<250	- -	<250	- -	<250	2,400 J	15,000	350	<250	<500	<120
	B-Sand	06/21/07	Primary	<400	8,700	- -	<200	- -	<200	- -	<200	5500 B	15,000	360	86 J	<400	<100
	B-Sand	09/24/08	Primary	<10	17	<10	2.1 J	10	<5	4.6	<5	39 J	1,500	34	<5	<10	43
	B-Sand	12/02/08	Primary	<10	23	8.2 J	3.6 J	18	<5	8.5	<5	<50	1,600	62	2.3 J	<10	680
	B-Sand	03/11/09	Primary	<8	100	6.4 J	2.8 J	16	4	6.4	<4	21 J	1,200	93	8.0	<8	660
	B-Sand	09/10/09	Primary	<5	45	12.0	4.5	25	<2.5 P-HS	11.0	<3	17 J	780	110	1 J	<5	96
AW0066UB	B-Sand	05/10/07	Primary	<500	8,400	- -	<250	- -	<250	- -	<250	1,800 J	8,700	360	100 J	<500	220
	B-Sand	06/20/07	Primary	<2,000	11,000	- -	<1,000	- -	<1,000	- -	<1,000	<10,000	11,000	410 J	<1,000	<2,000	340 J
	B-Sand	03/25/08	Primary	6.3	180	<2	0.32 J	<1	1.2	<0.5	<1	82	5.7	8.1	72	<2	100
	B-Sand	06/17/08	Primary	<4	920	<4	4.1	20	<2	7.8	<2	12 J	2,000	67	590	<4	860
	B-Sand	09/24/08	Primary	<2	130	<2	0.71 J	3.1	<1	1.1	<1	29 B	240	11	37	<2	270
	B-Sand	12/02/08	Primary	0.61 J	78	<2	0.83 J	4	<1	1.5	<1	5 J	280	9.1	17	<2	190
	B-Sand	03/11/09	Primary	<2.0	0 J	1 J	0.52 J	3	<1	0.97	<1	7 J	260	4.3	1 J	<2	44
	B-Sand	09/10/09	Primary	<2	0.64 J	1.0 J	0.5 J	2.7	<1	0.99	<1	3.7 J	160	2.9	0.27 J	<2	2
AW0067UB	B-Sand	05/10/07	Primary	<40	1,000	- -	<20	- -	<100	- -	<20	8,900	79	73	3,700	<40	<10
	B-Sand	06/19/07	Primary	<2	6,100	- -	1.1	- -	1.7	- -	0.36 J	480	390	220	3,100	<2	10
	B-Sand	03/25/08	Primary	14	500	<8	<4	<4	<4	<2	<4	240	5.5	13	160	<8	6.4
	B-Sand	06/17/08	Primary	<8	820	<8	3.4 J	15	<4	6.1	<4	22 J	2,000	63	510	<8	780
	B-Sand	09/24/08	Primary	<4	57	<4	0.98 J	4.8	<2	1.7	<2	26 B	440	14	56	<4	240
	B-Sand	09/24/08	Duplicate	<4	63	<4	0.94 J	4.8	<2	1.6	<2	25 B	460	14	59	<4	240
	B-Sand	12/02/08	Primary	0.66 J	43	53	0.96 J	4.9	<1	1.8	<1	<10	340	11	30	<2	170
	B-Sand	03/11/09	Primary	<2.0	29	<2	0.96 J	4.2	<1	1.4	<1	<10	290	11	3	<2	74
	B-Sand	09/10/09	Primary	<2	<1	1 J	0.6 J	3.2	<1 P-HS	1.1	<1	5 J	150 MH	4	<1.0	<2	2
AW0073C	C-Sand	05/10/07	Primary	<80	1,200	- -	11 J	- -	<100	- -	<40	4,900	12,000	75	210	<80	<20
	C-Sand	06/20/07	Primary	<100	1,400	- -	<50	- -	<50	- -	<50	5,400	14,000	84	140	<100	<25
	C-Sand	01/29/08	Primary	<40	770	- -	6 J	- -	<20	- -	<20	470	6,900	54	53	<40	94
	C-Sand	02/26/08	Primary	<20	500	3.1 P-HS,J	3.6 J	14	<10	4.1 J	<10	2,200	4,400	42	30	<20 L	260
	C-Sand	03/25/08	Primary	<40	290	<40	<20	14 J	<20	<10	<20	9,800	3,200	35	14 J	<40	810
	C-Sand	04/22/08	Primary	<20	160	2.7 J	<10	6.7 J	<10	<5	<10	720	2,900	28	14	<20	1,200
	C-Sand	05/20/08	Primary	<4	46	1.3 J	0.84 J	3.6	<2	1.2	<2	7,700	620	12	3.5	<4	430
	C-Sand	06/17/08	Primary	<4	36	1.3 J	1 J	5	<2	1.8	<2	2,200	850	11	15	<4	480
	C-Sand	08/06/08	Primary	<4	24	1.5 J	1.1 J	4.9	<2 B	1.7	<2	<20	840	12	9.2	<4	490
	C-Sand	09/24/08	Primary	<2	14	0.9 J	0.36 J	2	<1	0.68	<1	1,000	41	6.9	5.4	<2	310
	C-Sand	12/03/08	Primary	<20	11	<20	<10	7.2 J	<10	<5	<10	520	1,100	15	9 J	<20	800
	C-Sand	03/11/09	Primary	<2	19	2 J	1	5.1	<1	2	<1	100	400	12	4	<2	500
	C-Sand	09/11/09	Primary	<2	30	1 J	0 J	2.3	<1	1	<1	15	41	8	2	<2	230
	C-Sand	09/11/09	Duplicate	<2	32	1.5 J	0 J	2.4	<1	1.0	<1	16	45	9	2.2	<2	250
AW0074UB	B-Sand	05/09/07	Primary	1.1 J	120	- -	<1	- -	54	- -	0.55 J	880	0.79 J	79	2,300	<2	0.52
	B-Sand	06/19/07	Primary	<2	1,100	- -	1.1	- -	<1	- -	0.35 J	1,000	290	120	1,400	<2	5
	B-Sand	01/29/08	Primary	<20	730	- -	<10	- -	<10	- -	<10	52 J	220	77	2,000	<20	3.9 J
	B-Sand	08/06/08	Primary	36 J	1,800	<80	18 J	89	<40 B	32	<40	<400	15,000	250	1,200	<80	5,400
	B-Sand	12/02/08	Primary	<100	870	<100	20 J	97	<50	37	<50	210 J	15,000	210	300	<100	8,300
	B-Sand	03/11/09	Primary	<80	840	<80	15 J	72	<40	26	<40	<400	17,000	190	770	<80	5,000
	B-Sand	09/11/09	Primary	<50	420	<50	30	130	<25	53	<25	<250	15,000	300	120	<50	9,700

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Well I.D.	Category	Sample Date	Sample Type	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Bromodichloromethane	Carbon Disulfide	Chloroethane	Chloroform
AW0075UB	B-Sand	05/09/07	Primary	79	72	450	10,000	110	<5	7,000	2,000	100	<1	0.99 J	<2	27
	B-Sand	06/21/07	Primary	99	50	410	10,000	87	600	5,100	1,300 J	110	<20	<20	<40	<20
	B-Sand	01/30/08	Primary	350	82	560	14,000	140	11,000	26,000	5,100	95	<40	<40	<80	40
	B-Sand	02/26/08	Primary	250	78 J	560	13,000	180	19,000	26,000	10,000	73	<100	<100	<200	<100
	B-Sand	03/25/08	Primary	230	76	490	4,200	140	34,000	15,000	5,600	64	<50	<50	<100	28 J
	B-Sand	04/22/08	Primary	100	79 J	540	3,200	130	34,000	20,000	8,900	50	<100	<100	<200	<100
	B-Sand	04/22/08	Duplicate	100	77 J	540	3,200	130	38,000	24,000	14,000	44 J	<100	<100	<200	<100
	B-Sand	05/20/08	Primary	22 J	42	320	2,300	87	12,000	5,500	3,900	32	<40	<40	<80	<40
	B-Sand	06/18/08	Primary	<100	62 J	460	4,800	120	40,000	9,800	12,000	42 J	<100	<100	<200	<100
	B-Sand	08/06/08	Primary	<40	65	430	2,900	97	12,000	7,800	6,300	52	<40	<40	29 J	<40
	B-Sand	08/06/08	Duplicate	<40	62	430	3,100	97	12,000	8,200	6,800	54	<40	<40	<80	<40
	B-Sand	09/24/08	Primary	<40	51	320	1,500	86	12,000	6,200	3,800	42	<40	<40	41 J	<40
	B-Sand	12/03/08	Primary	<10	24	150	1,000	48	1,500	1,900	790	35	<10	<10	51	4.5 J
	B-Sand	03/11/09	Primary	<5	20	120	2,600	42	230	280	200	32	<5	<5	42	6.0
	B-Sand	09/11/09	Primary	<2	11	64	1,100	26	38	130	94	30	<2	<2	68	3
AW0076UB	B-Sand	05/09/07	Primary	88	180	990	9,800	260	75,000	31,000	18,000	100	<1	<1	<2	53
	B-Sand	06/21/07	Primary	140	180	960	9,600	280	57,000	29,000	17,000	82 J	<100	<100	<200	39 J
	B-Sand	01/30/08	Primary	22 J	170	1,300	11,000	320	140,000	24,000	39,000	90	<50	<50	<100	59
	B-Sand	02/26/08	Primary	<400	<400	920	6,600	220	110,000	17,000	31,000	<200	<400	<400	<800	<400
	B-Sand	03/25/08	Primary	<50	72	510	1,300	130	64,000	7,700	9,200	42	<50	<50	<100	<50
	B-Sand	04/22/08	Primary	<2,000	620 J	5,100	24,000	1,200	83,000	94,000	160,000	<1,000	<2,000	<2,000	<4,000	<2,000
	B-Sand	05/20/08	Primary	<400	<400	680	2,400	180 J	66,000	9,500	13,000	<200	<400	<400	<800	<400
	B-Sand	06/18/08	Primary	<100	60 J	480	1,900	120	30,000	8,200	9,000	44 J	<100	<100	<200	<100
	B-Sand	08/07/08	Primary	<40	29 J	260	360	53	7,100	5,400	4,900	44	<40	<40	100	<40
	B-Sand	09/24/08	Primary	<40 P1	49 P1	290 P1	760 P1	98 P1	11,000 P1	8,200 P1	4,800 P1	36 P1	<40 P1	<40 P1	54 P1	<40 P1
	B-Sand	12/03/08	Primary	<10	9.2 J	82	43	43	2,000	4,000	1,300	32	<10	<10	110	<10
	B-Sand	12/03/08	Duplicate	<10	10	95	54	47	3,000	4,700	2,500	34	<10	<10	130	<10
	B-Sand	03/11/09	Primary	<5	<5	10	4 J	19	120	1,200	120	31	<5	<5	130	<5
	B-Sand	09/11/09	Primary	<5	<5	<5.0	14.0	10	<25	35	<50	26	<5	<5	82	<5
AW0077UB	B-Sand	05/10/07	Primary	<100	71 J	780	5,600	230	61,000	10,000	17,000	37 J	<100	<100	<200	<100
	B-Sand	06/20/07	Primary	<100	61 J	740	6,700	160	56,000	7,000	12,000	49 J	<100	<100	<200	<100
	B-Sand	01/30/08	Primary	<40	38 J	310	3,100	110	1,300	450	1,000	43	<40	<40	<80	<40
	B-Sand	02/26/08	Primary	<40	44	250	990	89	<200	<200	300 J	48	<40	<40	<80	<40
	B-Sand	02/26/08	Duplicate	<20	46	240	950	93	190	140	370	44	<20	<20	<40	<20
	B-Sand	03/25/08	Primary	<20	19 J	340	32	110	770	500	560	48	<20	<20	20 J	<20
	B-Sand	04/22/08	Primary	<40	20 J	330	23 J	79	4,000	1,200	2,100	27	<40	<40	<80	<40
	B-Sand	05/20/08	Primary	<20	<20	270	42	87	1,500	1,400	1,200	29	<20	<20	47	<20
	B-Sand	06/18/08	Primary	<10	<10	41	18	54	2,000	1,700	940	26	<10	<10	130	<10
	B-Sand	08/06/08	Primary	<10	<10	<10	<10	15	450	2,000	250	22	<10	<10	95	<10
	B-Sand	09/24/08	Primary	<10	<10	<10	<10	11	<50	310	<100	24	<10	<10	100	<10
	B-Sand	12/03/08	Primary	<10	<10	<10	<10	7.4	<50	<50	<100	24	<10	<10	72	<10
	B-Sand	03/11/09	Primary	<4	<4	<4	7	6.7	<20	<20	<40	20	<4	<4	67	<4
	B-Sand	09/11/09	Primary	<1	<1	3	1.4	5.3	<5 M1	<5	<10	20	<1	<1	51	<1
EWB001	B-Sand	05/08/07	Primary	<10	<10	3.6 J	460	<5	<50	<50	<100	<10	<10	<10	<20	<10
	B-Sand	06/18/07	Primary	<2	<2	3.5	660	<1	<10	<10	<20 C	<2	<2	<2	<4	1.5 J
	B-Sand	03/28/08	Primary	<2	<2	13	940	<1	<10	<10	<20	1.5	<2	<2	<4	1.7 J
EWB002	B-Sand	06/21/07	Primary	71	100	530	7,400	150	58,000	13,000	7,600	58	<10	<10	<20	33
	B-Sand	06/21/07	Duplicate	73	100	550	7,500	150	62,000	14,000	8,700 J	59	<10	<10	<20	34
	B-Sand	12/12/07	Primary	22 J	76	540	3,400	140	16,000	11,000	8,000	58	<50	<50	<100	26 J
	B-Sand	01/29/08	Primary	<40	37 J	390	3,200	85	370	1,400	420	35 J	<40	<40	<80	14 J
	B-Sand	01/29/08	Duplicate	<40	39 J	420	3,700	94	310	1,600	490	38 J	<40	<40	<80	14 J
	B-Sand	02/26/08	Primary	<20	33	300	170	53	140	330	190 J	33	<20	<20	<40	7.4 J
	B-Sand	03/25/08	Primary	<20	17 J	180	18 J	31	960	420	320	20	<20	<20	<40	<20
	B-Sand	04/22/08	Primary	<20	9 J	140	290	47	1,300	1,500	730	17	<20	<20	18 J	<20

Well I.D.	Category	Sample Date	Sample Type	Chloromethane	cis-1,2-Dichloroethene	Di-isopropyl Ether (DIPE)	Ethylbenzene	m,p-Xylenes	Methylene chloride	o-Xylene	Tetrachloroethene	Tetrahydrofuran (THF)	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride
AW0075UB	B-Sand	05/09/07	Primary	<2	6,800	- -	24	- -	160	- -	<1	3,700	12,000	340	560	<2	32
	B-Sand	06/21/07	Primary	<40	6,700	- -	24	- -	94	- -	<20	880	15,000	330	410	<40	62
	B-Sand	01/30/08	Primary	<80	8,000	- -	17 J	- -	<40	- -	<40	270 J	18,000	390	460	<80	1,000
	B-Sand	02/26/08	Primary	<200	7,400	<200 L	<100	<100	<100	<50	<100	<1,000	12,000	340	460	<200 L	800
	B-Sand	03/25/08	Primary	<100	4,300	<100	<50	60	<50	24 J	<50	<500	6,900	310	370	<100	3,300
	B-Sand	04/22/08	Primary	<200	2,700	<200	<100	<100	<100	<50	<100	<1,000	9,800	210	<100	<200	5,600
	B-Sand	04/22/08	Duplicate	<200	2,600	<200	<100	<100	<100	<50	<100	<1,000 C	11,000	220	<100	<200	6,600
	B-Sand	05/20/08	Primary	<80	1,500	<80	<40	30 J	<40	14 J	<40	<400	4,600	160	340	<80	3,000
	B-Sand	06/18/08	Primary	<200	2,600	570	<100	<100	<100	<50	<100	<1,000	6,400	210	280	<200	2,800
	B-Sand	08/06/08	Primary	<80	1,600	<80	<40	61	<40 B	25	<40	<400	6,600	220	31 J	<80	5,800
	B-Sand	08/06/08	Duplicate	<80	1,600	<80	<40	61	<40 B	25	<40	<400	6,800	240	32 J	<80	6,300
	B-Sand	09/24/08	Primary	<80	1,700	<80	<40	38 J	<40	16 J	<40	150 J	5,100	200	27 J	<80	5,800
	B-Sand	12/03/08	Primary	<20	1,000	<20	5.1 J	28	<10	12	<10	40 J	3,300	130	84	<20	2,900
	B-Sand	03/11/09	Primary	<10	1,700	9 J	2.6 J	14	<5	6	<5	27 J	1,200	130	1,400	<10	1,700
	B-Sand	09/11/09	Primary	<4	1,100	9.5	3.3	19	<2	9	<2	<20	420	100	59	<4	1,000
AW0076UB	B-Sand	05/09/07	Primary	<2	12,000	- -	18	- -	300	- -	<1	1,500 J	16,000	500	53	<2	25
	B-Sand	06/21/07	Primary	<200	11,000	- -	<100	- -	<100	- -	<100	5,800	15,000	400	48 J	<200	<50
	B-Sand	01/30/08	Primary	<100	11,000	- -	14 J	- -	<50	- -	<50	270 J	15,000	570	28 J	<100	4,000
	B-Sand	02/26/08	Primary	<800	6,000	<800 L	<400	<400	<400	<200	<400	<4,000	8,700	330 J	<400	<800 L	5,500
	B-Sand	03/25/08	Primary	<100	2,000	<100	<50	46 J	<50	24 J	<50	<500	4,400	220	<50	<100	11,000
	B-Sand	04/22/08	Primary	<4,000	24,000	<4,000	<2,000	<2,000	<2,000	<1,000	<2,000	<20,000 C	59,000	1,900 J	<2,000	<4,000	60,000
	B-Sand	05/20/08	Primary	<800	3,000	<800	<400	<400	<400	<200	<400	<4,000	7,800	260 J	<400	<800	6,100
	B-Sand	06/18/08	Primary	<200	2,000	<200	<100	<100	<100	<50	<100	<1,000	6,000	220	<100	<200	5,600
	B-Sand	08/07/08	Primary	<80	160	<80	<40	49	52	21	<40	180 J	6,300	180	13 J	<80	5,300
	B-Sand	09/24/08	Primary	<80 P1	350 P1	<80 P1	<40 P1	34 P1,J	<40 P1	15 P1,J	<40 P1	170 P1,J	4,200 P1	160 P1	<40 P1	<80 P1	5,000 P1
	B-Sand	12/03/08	Primary	<20	22	<20	4.3 J	25	<10	13	<10	<100	2,800	100	<10	<20	2,200
	B-Sand	12/03/08	Duplicate	<20	23	<20	4.4 J	26	<10	13	<10	45 J	3,500	120	<10	<20	2,200
	B-Sand	03/11/09	Primary	<10	11	11	5.2	31	<5	12	<5	29 J	2,300	76	<5	<10	310
	B-Sand	09/11/09	Primary	<10	43	8 J	4.2 J	26	<5	11	<5	23 J	840	42	<5	<10	110
AW0077UB	B-Sand	05/10/07	Primary	<200	6,400	- -	<100	- -	<100	- -	<100	32,000	4,500	220	230	<200	120
	B-Sand	06/20/07	Primary	<200	8,600	- -	<100	- -	<100	- -	<100	2,300 B	4,800	280	41 J	<200	320
	B-Sand	01/30/08	Primary	<80	5,300	- -	<40	- -	<40	- -	<40	470	590	260	50	<80	8,600
	B-Sand	02/26/08	Primary	<80	3,300	10 J	<40	<40	<40	<20	<40	<400	190	260	<40	<80	13,000
	B-Sand	02/26/08	Duplicate	<40	3,000	11 J	<20	<20	<20	<10	<20	79 J	190	230	<20	<40	11,000
	B-Sand	03/25/08	Primary	<40	99	14 J	<20	<20	<20	<10	<20	210	530	190	<20	<40	15,000
	B-Sand	04/22/08	Primary	<80	53	<80	<40	<40	<40	<20	<40	360 J	1,100	110	<40	<80	87,000
	B-Sand	05/20/08	Primary	<40	67	<40	<20	12 J	<20	<10	<20	160 J	1,900	120	<20	<40	5,800
	B-Sand	06/18/08	Primary	<20	25	15 J	3.3 J	18	<10	8.4	<10	100	2,300	84	4.8 J	<20	4,600
	B-Sand	08/06/08	Primary	<20	<10	9.6 J	3.5 J	18	<10	7.9	<10	60 J	2,200	55	<10	<20	20
	B-Sand	09/24/08	Primary	<20	<10	7.2 J	3.5 J	19	<10	7.9	<10	47 J	2,100	53	<10	<20	20
	B-Sand	12/03/08	Primary	<20	6.7 J	7.7 J	4.1 J	22	<10	9.8	<10	45 J	2,100	42	<10	<20	19
	B-Sand	03/11/09	Primary	<8	9.6	6.2 J	2.8 J	16	<4	6.6	<4	30 J	1,200	35	<4	<8	29
	B-Sand	09/11/09	Primary	<2	3.7	7.4	2.8	16	<1	6.5	<1	22	46	27	1 J	<2	8
EWB001	B-Sand	05/08/07	Primary	<20	56	- -	<10	- -	11	- -	<10	<100	3.9 J	4.1 J	560	<20	<5
	B-Sand	06/18/07	Primary	<4	49	- -	<2	- -	2.8	- -	<2	<20	<2	4.2	680	<4	<1
	B-Sand	03/28/08	Primary	<4	19	<4	<2	<2	<2	<1	0.64 J	<20	<2	14	860	<4	<1
EWB002	B-Sand	06/21/07	Primary	<20	5,800	- -	8.6 J	- -	<10	- -	<10	54 B,J	7,300	300	650 M2	<20	16
	B-Sand	06/21/07	Duplicate	<20	6,200	- -	8.9 J	- -	<10	- -	<10	66 B,J	7,800	300	620	<20	19
	B-Sand	12/12/07	Primary	<100	6,100	- -	<50	- -	<50	- -	<50	<500	6,800	300	14 J	<100	5,600
	B-Sand	01/29/08	Primary	<80 L	2,400	- -	<40	- -	68	- -	<40	140 J	2,600	220	<40	<80	6,800
	B-Sand	01/29/08	Duplicate	<80 L	2,800	- -	<40	- -	70	- -	<40	160 J	2,700	240	12 J	<80	7,500
	B-Sand	02/26/08	Primary	<40	160	9 J	<20	<20	<20	<10	<20	<200	1,200	200	<20	<40	9,900
	B-Sand	03/25/08	Primary	<40	12 J	<40	<20	<20	<20	<10	<20	<200	810	120	<20	<40	6,800
	B-Sand	04/22/08	Primary	<40	100	<40	<20	<20	<20	<10	<20	<200	810	91	5.8 J	<40	5,700

Well I.D.	Category	Sample Date	Sample Type	1,1,1-Trichloroethane	1,1,2-Trichloroethane	1,1-Dichloroethane	1,1-Dichloroethene	1,2-Dichloroethane	2-Butanone (MEK)	4-Methyl-2-pentanone (MIBK)	Acetone	Benzene	Bromodichloromethane	Carbon Disulfide	Chloroethane	Chloroform
EWB002	B-Sand	05/20/08	Primary	<10	<10	**71**	**150**	**40**	**600**	**750**	**280**	**18**	<10	<10	**49**	<10
(cont.)	B-Sand	05/20/08	Duplicate	<5	**2.7 J**	**78**	**170**	**44**	**740**	**840**	**340**	**18**	<5	<5	**55**	<5
	B-Sand	06/18/08	Primary	<4	<4	**30**	**44**	**31**	**1,100**	**1,100**	**520**	**21**	<4	<4	**81**	<4
	B-Sand	08/06/08	Primary	<10	<10	**12**	**31**	**15**	**80**	**320**	**51 J**	**21**	<10	<10	**62**	<10
	B-Sand	09/24/08	Primary	<5	<5	**16**	**35**	**7.4**	<25	<25	<50	**13**	<5	<5	**45**	<5
	B-Sand	12/03/08	Primary	<4	<4	**31**	**120**	**11**	<20	<20	<40	**13**	<4	<4	**33**	<4
	B-Sand	03/11/09	Primary	<1	<1	**7.2**	**2.9**	**5**	<5	<5	<10	**8.9**	<1	<1	**29**	<1
	B-Sand	03/11/09	Duplicate	<1	<1	**9.0**	**3.4**	**6**	<5	<5	<10	**11.0**	<1	<1	**36**	<1
	B-Sand	09/10/09	Primary	<1	<1	**11**	**2.8**	**4.6**	<5	<5	<10	**11**	<1	<1	**35**	<1
MWB006	B-Sand	03/27/08	Primary	<2,000	<2,000	**3,000**	<2,000	<1,000	**990,000**	<10,000	**110,000**	<1,000	<2,000	<2,000	<4,000	<2,000
	B-Sand	08/07/08	Primary	<2,000	<2,000	**3,800**	<2,000	<1,000	**1,500,000**	**9,600 J**	**190,000**	<1,000	<2,000	<2,000	<4,000	<2,000
	B-Sand	09/24/08	Primary	<2,000	<2,000	**2,600**	<2,000	<1,000	**790,000**	**7,700 J**	**130,000**	<1,000	<2,000	<2,000	<4,000	<2,000
	B-Sand	12/02/08	Primary	<1,000	<1,000	**2,200**	<1,000	<500	**910,000**	**7,400**	**91,000**	<500	<1,000	<1,000	<2,000	<1,000
	B-Sand	03/12/09	Primary	<1,000	<1,000	**2,800**	**430 J**	**310 J**	**730,000**	**6,700**	**110,000**	<500	<1,000	<1,000	<2,000	<1,000
	B-Sand	09/10/09	Primary	<2,500	<2,500	**3,100**	<2,500	<1,200	**1,200,000**	<12,000	**150,000**	<1,200	<2,500	<2,500	<5,000	<2,500
TMW_07	B-Sand	05/08/07	Primary	<1	**7.8**	**0.75 J**	**19**	<0.5	<5	<5	<10	<1	<1	<1	<2	**4.2**
	B-Sand	06/18/07	Primary	<1	**10**	**0.96 J**	**18**	<0.5	<5	<5	<10	<1	<1	<1	<2	**5.3**
	B-Sand	03/25/08	Primary	<5	**7.2**	<5	**12**	<2.5	<25	<25	<50	<2.5	<5	<5	<10	**4.4 J**
	B-Sand	06/17/08	Primary	<2	**6.9**	**1.2 J**	**10**	<1	<10	<10	<20	<1	<2	<2	<4	**4.4**
	B-Sand	09/24/08	Primary	<4	**7.2**	<4	**11**	<2	<20	<20	<40	<2	<4	<4	<8	**4**
	B-Sand	12/02/08	Primary	<4	**6.3**	<4	**11** M2	<2	<20	<20	<40	<2	<4	<4	<8	**3.8 J**
	B-Sand	03/11/09	Primary	<3	**5.2**	**1 J**	**11**	<1	<12	<12	<25	<1	<3	<3	<5	**3.8**
	B-Sand	09/10/09	Primary	<2.5	**5.5**	**1.1 J**	**10**	<1.2	<12	<12	<25 C	<1.2	<2.5	<2.5	<5	**3.4**
WCC_06S	B-Sand	05/08/07	Primary	<20	**15 J**	**170**	**6,100**	**29**	<100	<100	<200	**46**	<20	<20	<40	**11 J**
	B-Sand	06/19/07	Primary	<1	**5.1**	**56**	**1,900**	**8.6**	<5 C	<5	<10 C	**14**	<1	<1	<2	**4**
	B-Sand	01/29/08	Primary	<1	<1	<1	**21**	<0.5	<5	<5	<10	<1	<1	<1	<2	<1
	B-Sand	03/26/08	Primary	<1	<1	**1.8**	**290**	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**1.1**
	B-Sand	08/05/08	Primary	**26**	**16 J**	**100**	**360**	**13**	**200**	**470**	**300**	**21**	<20	<20	<40	<20
	B-Sand	12/02/08	Primary	<1	<1	**2**	**350** M1	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**1.4**
	B-Sand	03/11/09	Primary	<1	<1	**3**	**690**	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**1.5**
	B-Sand	09/10/09	Primary	<3	<3	**4.2**	**300**	<1.2	**850**	<12	**200**	<1.2	<3	<3	<5	**1.6 J**
WCC_12S	B-Sand	05/09/07	Primary	<1	**0.33 J**	**12**	**13**	<0.5	<5	<5	<10	<1	<1	<1	<2	**2.7**
	B-Sand	06/18/07	Primary	<1	<1	**17**	**17**	<0.5	<5	<5	<10	<1	<1	<1	<2	**4**
	B-Sand	09/21/07	Primary	<1	**0.37 J**	**18**	**15**	<0.5	<5 C	<5	<10 C	<1	**0.64 J**	<1	<2	**4.2**
	B-Sand	03/25/08	Primary	<1	<1	**4**	**2.3**	<0.5	<5	<5	**18**	<0.5	**0.47 J**	<1	<2	**2.5**
	B-Sand	03/25/08	Duplicate	<1	<1	**4.2**	**2.6**	<0.5	<5	<5	**12**	<0.5	**0.43 J**	<1	<2	**2.4**
	B-Sand	06/17/08	Primary	<1	<1	**5.4**	**4.8**	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**2.2**
	B-Sand	09/24/08	Primary	<1	<1	**5.6**	**3.6**	<0.5	<5	<5	**6.7 J**	<0.5	**0.37 J**	<1	<2	**2.5**
	B-Sand	12/03/08	Primary	<1	<1	**4.9**	**3.8**	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**2.6**
	B-Sand	03/11/09	Primary	<1	<1	**5.1**	**3.6**	<0.5	<5	<5	<10	<0.5	<1	<1	<2	**2.5**
	B-Sand	09/10/09	Primary	<1	<1	**3.4**	**3.1**	<0.5	<5	<5	<10 C	<0.5	<1	<1	<2	**2.9**

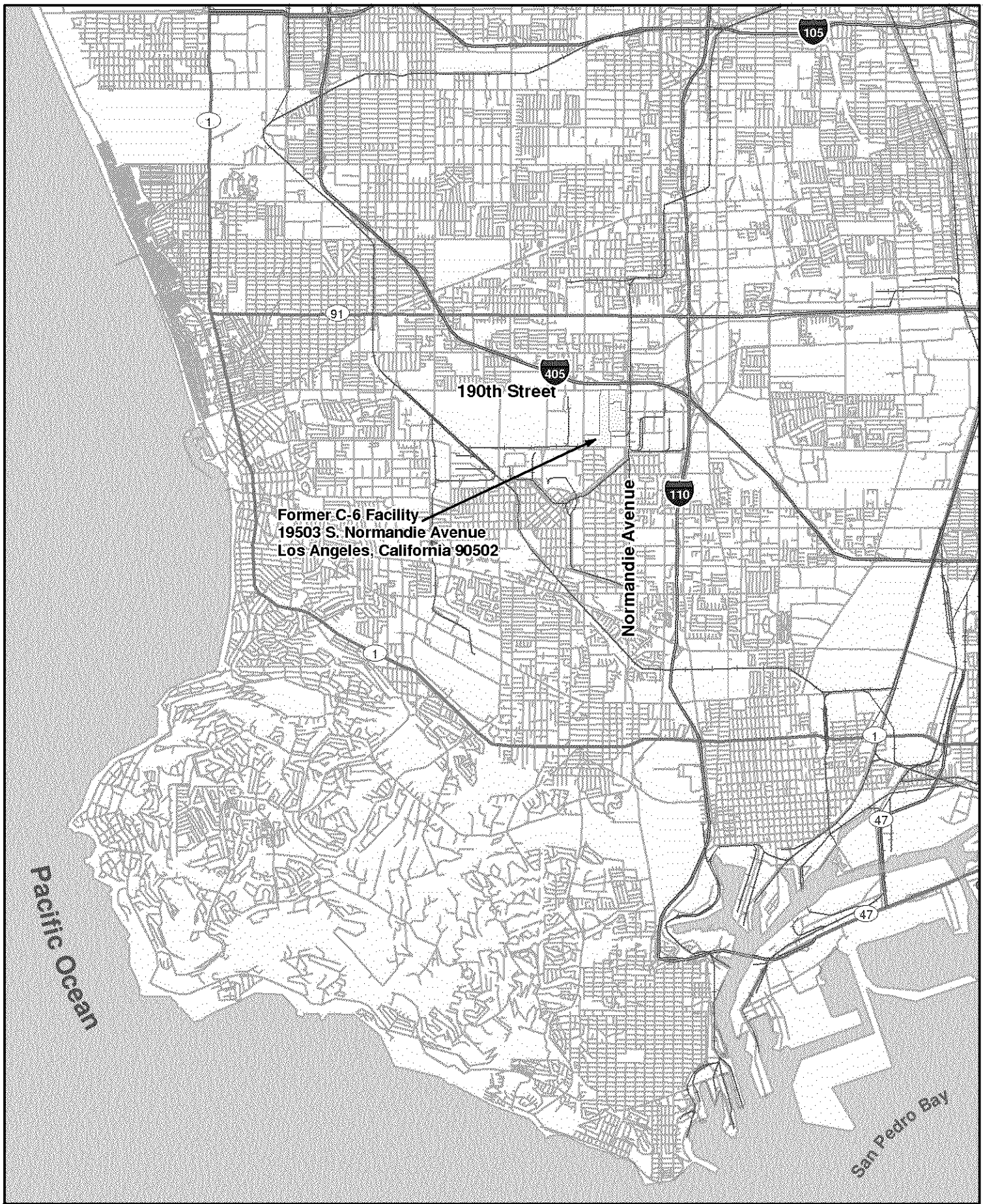
Notes:
Bold indicates detected concentration
< = not detected at a concentration greater than the laboratory reporting limit (RL) indicated
- - = not analyzed
J = estimated value; result below RL and above or equal to MDL (method detection limit)
A-01 = used unpreserved VOA because all preserved VOAs had headspace
P1 = sample received and analyzed without chemical preservation
P6 = sample received unpreserved; however, the sample was analyzed within 7 days per EPA recommendation
P-HS = sample container contained headspace
L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits
B = analyte was detected in the associated Method Blank
M1 = MS and/or MSD were above the acceptance limits due to sample matrix interference
M2 = the MS and/or MSD were below the acceptance limits due to sample matrix interference
M7 = the MS and/or MSD were above the acceptance limits
C = Calibration Verification recovery was above the method control limit for analyte; analyte not detected, data not impacted
H = Sample analysis performed past method-specified holding time.

Well I.D.	Category	Sample Date	Sample Type	Chloromethane	cis-1,2-Dichloroethene	Di-isopropyl Ether (DIPE)	Ethylbenzene	m,p-Xylenes	Methylene chloride	o-Xylene	Tetrachloroethene	Tetrahydrofuran (THF)	Toluene	trans-1,2-Dichloroethene	Trichloroethene	Trichlorofluoromethane	Vinyl chloride
EWB002	B-Sand	05/20/08	Primary	<20	**120**	**7 J**	**3 J**	**15**	<10	**5.2**	<10	<100	**1,900**	**69**	**2.8 J**	<20	**3,000**
(cont.)	B-Sand	05/20/08	Duplicate	<10	**130**	**7.6 J**	**3.3 J**	**16**	<5	**5.5**	<5	<50	**1,900**	**77**	**3.4 J**	<10	**2,900**
	B-Sand	06/18/08	Primary	<8	**14**	**11**	**4**	**20**	<4	**7.5**	<4	**16 J**	**1,700**	**65**	<4	<8	**2,500**
	B-Sand	08/06/08	Primary	<20	**6.2 J**	**7.8 J**	**4 J**	**20**	<10	**7.6**	<10	**44 J**	**2,200**	**50**	<10	<20	**430**
	B-Sand	09/24/08	Primary	<10	**3.8 J**	**3.8 J**	**2.1 J**	**11**	<5	**4.2**	<5	<50	**1,200**	**44**	**2.3 J**	<10	**910**
	B-Sand	12/03/08	Primary	<8	**21**	**4 J**	<4	**11**	<4	**4.3**	<4	<40	**540**	**42**	**3.4 J**	<8	**1,100**
	B-Sand	03/11/09	Primary	<2	**1.4**	**3**	**1.1**	**6.8**	<1	**2.8**	<1	**14**	**420** M2	**23**	<1	<2	**33**
	B-Sand	03/11/09	Duplicate	<2	**1.6**	**4**	**1.3**	**8.5**	**1**	**3.5**	<1	**16**	**330**	**28**	**1 J**	<2	**45**
	B-Sand	09/10/09	Primary	<2	**2.2**	**4.4**	**1.4**	**8.6**	<1 P-HS	**3.9**	<1	**13**	**11**	**25**	**0.32 J**	<2	**55**
MWB006	B-Sand	03/27/08	Primary	<4,000	<2,000	<4,000	<2,000	<2,000	<2,000	<1,000	<2,000	<20,000	**41,000**	**600 J**	<2,000	<4,000	**23,000**
	B-Sand	08/07/08	Primary	<4,000	<2,000	<4,000	<2,000	<2,000	<2,000	<1,000	<2,000	**8,100 J**	**53,000**	**780 J**	<2,000	<4,000	**21,000**
	B-Sand	09/24/08	Primary	<4,000	<2,000	<4,000	<2,000	<2,000	<2,000	<1,000	<2,000	**11,000 J**	**36,000**	**600 J**	<2,000	<4,000	**14,000**
	B-Sand	12/02/08	Primary	<2,000	<1,000	<2,000	<1,000	<1,000	<1,000	<500	<1,000	<10,000	**31,000**	**440 J**	<1,000	<2,000	**12,000**
	B-Sand	03/12/09	Primary	<2,000	<1,000	<2,000	<1,000	**620 J**	<1,000	**360 J**	<1,000	<10,000	**37,000**	**530 J**	<1,000	<2,000	**16,000**
	B-Sand	09/10/09	Primary	<5,000	<2,500	<5,000	<2,500	<2,500	<2,500	<1,200	<2,500	<25,000	**43,000**	<2,500	<2,500	<5,000	**17,000**
TMW_07	B-Sand	05/08/07	Primary	<2	**1.6**	- -	<1	- -	<1	- -	**1.3**	<10	<1	<1	**1,700**	<2	<0.5
	B-Sand	06/18/07	Primary	<2	**2.6**	- -	<1	- -	<1	- -	**0.85 J**	<10	<1	<1	**1,600**	<2	<0.5
	B-Sand	03/25/08	Primary	<10	**1.6 J**	<10	<5	<5	<5	<2.5	<5	<50	<5	<5	**1,300**	<10	<2.5
	B-Sand	06/17/08	Primary	<4	**1.4 J**	<4	<2	<2	<2	<1	**0.76 J**	<20	<2	<2	**970**	<4	<1
	B-Sand	09/24/08	Primary	<8	**1.4 J**	<8	<4	<4	<4	<2	<4	<40	<4	<4	**1,100**	<8	<2
	B-Sand	12/02/08	Primary	<8	**1.6 J**	<8	<4	<4	<4	<2	<4	<40	<4	<4	**1,100**	<8	<2
	B-Sand	03/11/09	Primary	<5	**1.4 J**	<5	<3	<3	<3	<1	<3	<25	<3	<3	**1,000**	<5	<1
	B-Sand	09/10/09	Primary	<5	**0.98 J**	<5	<2.5	<2.5	<2.5	<1.2	<2.5	<25	<2.5	<2.5	**1,100**	<5	<1.2
WCC_06S	B-Sand	05/08/07	Primary	<40	**2,400**	- -	**5.6 J**	- -	<20 P-HS	- -	<20	<200	**1,500**	**150**	**1,000**	<40	**550**
	B-Sand	06/19/07	Primary	<2	**630**	- -	**1.5**	- -	<1	- -	**1.6**	<10 C	**390**	**58**	**590**	<2	**210**
	B-Sand	01/29/08	Primary	<2 L, M7	**1.2**	- -	<1	- -	<1	- -	<1	<10	<1	<1	**22**	<2	**0.46 J**
	B-Sand	03/26/08	Primary	<2	**4.5**	<2	<1	<1	<1	<0.5	**2.3**	<10	<1	**2.9**	**400**	<2	**0.8**
	B-Sand	08/05/08	Primary	<40	**86**	<40	**5.8 J**	**25**	**22**	**11**	<20	**89 J**	**3,000**	**70**	**120**	<40	**3,700**
	B-Sand	12/02/08	Primary	<2	**4**	<2	<1	<1	**1.9**	<0.5	**3.7**	<10	<1	**2.7**	**330** M1	<2	**1.6**
	B-Sand	03/11/09	Primary	<2	**4**	<2	<1	<1	<1.0	<0.5	**4.3**	<10	<1	**3.5**	**530**	<2	<0.5
	B-Sand	09/10/09	Primary	<5	**8.7**	<5	<3	<3	<3 P-HS	<1.2	**2.6**	<25	**50**	**3.6**	**400**	<5	**3.2**
WCC_12S	B-Sand	05/09/07	Primary	<2	**0.97 J**	- -	<1	- -	**1.6**	- -	**0.93 J**	<10	<1	<1	**110**	<2	<0.5
	B-Sand	06/18/07	Primary	<2	**1.7**	- -	<1	- -	<1	- -	<1	<10	<1	<1	**140**	<2	<0.5
	B-Sand	09/21/07	Primary	<2	**1.8**	- -	<1	- -	<1	- -	**1.1**	<10	<1	<1	**120**	<2	<0.5
	B-Sand	03/25/08	Primary	<2	<1	<2	<1	<1	<1	<0.5	<1	<10	<1	<1	**35**	<2	<0.5
	B-Sand	03/25/08	Duplicate	<2	<1	<2	<1	<1	<1	<0.5	**0.32 J**	<10	<1	<1	**35**	<2	<0.5
	B-Sand	06/17/08	Primary	<2 M2	<1	<2	<1	<1	<1	<0.5	**0.4 J**	<10	<1	<1	**44**	<2	<0.5
	B-Sand	09/24/08	Primary	<2	<1	<2	<1	<1	<1	<0.5	**0.43 J**	<10	<1	<1	**43**	<2	<0.5
	B-Sand	12/03/08	Primary	<2	**0.45 J**	<2	<1	<1	<1	<0.5	**0.36 J**	<10	<1	<1	**43**	<2	<0.5
	B-Sand	03/11/09	Primary	<2	**2.6**	<2	<1	<1	<1	<0.5	**0.34 J**	<10	**0 J**	<1	**36**	<2	<0.5
	B-Sand	09/10/09	Primary	<2	<1.0	<2	<1	<1	<1	<0.5	<1.0	<10	<1.0	<1	**27**	<2	<0.5

Notes:
Bold indicates detected concentration
< = not detected at a concentration greater than the laboratory reporting limit (RL) indicated
- - = not analyzed
J = estimated value; result below RL and above or equal to MDL (method detection limit)
A-01 = used unpreserved VOA because all preserved VOAs had headspace
P1 = sample received and analyzed without chemical preservation
P6 = sample received unpreserved; however, the sample was analyzed within 7 days per EPA recommendation
P-HS = sample container contained headspace
L = Laboratory Control Sample and/or Laboratory Control Sample Duplicate recovery was above the acceptance limits
B = analyte was detected in the associated Method Blank
M1 = MS and/or MSD were above the acceptance limits due to sample matrix interference.
M2 = the MS and/or MSD were below the acceptance limits due to sample matrix interference
M7 = the MS and/or MSD were above the acceptance limits
C = Calibration Verification recovery was above the method control limit for analyte; analyte not detected, data not impacted
H = Sample analysis performed past method-specified holding time.

Section 8
List of Figures

(6 pages to follow)



Legend

Former C-6 Facility

N

1 0 1

Miles

CDM

The Boeing Company
Former C-6 Facility
Site Vicinity Map

Figure 1

N

50 25 0 50

Feet

MWB007

MWB006

WCC_03S

MWB027

AW0055UB

WCC_04S

AW0067UB

AW0066UB

AW0065UB

EWB002

AW0064UB

AW0073C

AW0074UB

AW0077UB

AW0076UB

WCC_06S (See Note 1)

AW0075UB

WCC_07S

Building 1/36

TMW_08

EWB001

WCC_12S

TMW_07

MWB028

MWB003

Knox Street

NOTES: (1) WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.

Legend

- Compound
- Conveyance
- Vault
- Pilot Test Groundwater Extraction Well
- Group A (Injection / Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, C-Sand
- Group C (Downgradient Monitoring Well), B-Sand
- Group D (Upgradient Monitoring) Well, B-Sand
- Routine Groundwater Monitoring Well, B-Sand

CDM

Figure 2

The Boeing Company
Former C-6 Facility
WDR Well Location Map
Former Bldg 1/36 Pilot Test

S:\GIS\1155 Boeing C6\1155.010 Groundwater Monitoring 2009\ArcMapDocuments\014_1155.010_B-sand_GW_Elevations_092009.mxd\11/24/09

N

190TH STREET

NORMANDIE AVENUE

HARBORGATE WAY

PARCEL A

PARCEL B

PARCEL C

PARCEL D

FRANCISCO STREET

MWB020 -5.84

MWB007 -6.37

AW0066UB -5.69

AW0067UB -5.91

MWB006 (-6.70)

WCC_03S (-6.18)

AW0055UB -6.55

AW0065UB -5.75

WCC_04S -6.55

MWB027 -6.47

EWB002 -6.66

AW0077UB -6.65

DAC-P1 -6.17

AW0064UB -5.56

WCC_05S -6.49

AW0076UB -6.69

WCC_07S -6.56

AW0075UB -6.67

AW0074UB -6.62

WCC_06S -6.65

MWB028 -6.88

TMW_07 -6.82

WCC_12S -6.72

MWB013 -6.64

WCC_09S -6.7

MW0005 (-7.19)

TMW_15 -6.77

TMW_10 -7.03

BL-03 -6.95

TMW_06 -7.29

MWB014 -7.41

TMW_14 -7.3

TMW_11 -7.36

MWB019 -7.49

-5.9

-6.2

-6.5

-6.8

-7.1

-7.4

0 300 600

SCALE

LEGEND

- B-Sand Monitoring Well
- -7.41 — Approximate Water Level Elevation, Feet Mean Sea Level; ( ) Indicates Not Used in Contouring
- -6.8 — Approximate Water Level Elevation, Feet Mean Sea Level
- Approximate Parcel Boundary
- Approximate Former C-6 Facility Boundary

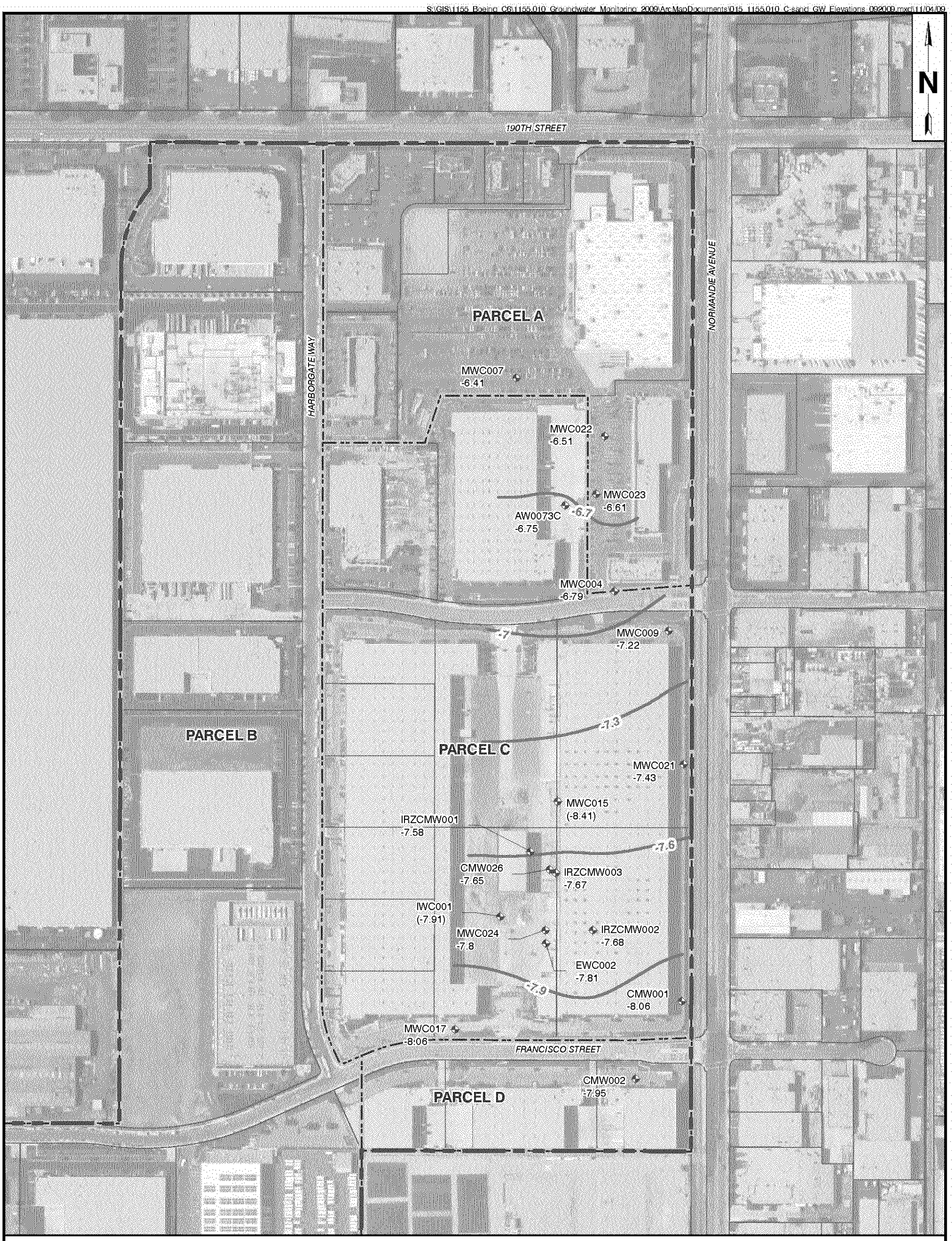
FIGURE 3

B-SAND GROUNDWATER ELEVATIONS SEPTEMBER 8, 2009

THE BOEING COMPANY
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

S:\GIS\1155_Boeing_C6\1155.010_Groundwater_Monitoring_2009\ArcMapDocuments\015_1155.010_C-sand_GW_Elevations_092009.mxd\11/04/09



LEGEND

- C-Sand Monitoring Well
- -6.75 — Approximate Water Level Elevation, Feet Mean Sea Level, ( ) Indicates Not Used in Contouring
- -6.7 — Approximate Water Level Elevation, Feet Mean Sea Level
- Approximate Parcel Boundary
- Approximate Former C-6 Facility Boundary

FIGURE 4

C-SAND GROUNDWATER ELEVATIONS SEPTEMBER 8, 2009

THE BOEING COMPANY
FORMER C-6 FACILITY
LOS ANGELES, CALIFORNIA

AVOCET ENVIRONMENTAL, INC.

N

50 25 0 50
Feet

MWB007
(3,840)

10,000 µg/L

MWB006
(14,480)

Building 1/36

WCC_03S
(12,020)

MWB027
(668)

AW0055UB
(22,069)

WCC_04S
(2,722)

AW0067UB
(12,302)

AW0066UB
(19,565)

AW0065UB
(15,538)

AW0064UB
(15,603)

EWB002
(14,908)

AW0073C
(5,955)

AW0074UB
(5,713)

AW0077UB
(14,256)

WCC_06S (See Note 1)
(9,493)

AW0076UB
(21,713)

AW0075UB
(17,617)

WCC_07S
(362)

TMW_08
(5,627)

EWB001
(1,168)

WCC_12S
(146)

MWB028
(1,085)

MWB003
(12,208)

TMW_07
(1,694)

Knox Street

NOTES: (1) WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.
(2) Baseline concentrations for the wells were averaged for all the sampling rounds performed in 2007.

Legend

- Compound
- CVOCs - 10,000 µg/L (Dashed where inferred)
- Conveyance
- Vault
- (120) CVOCs (micrograms per liter - µgL)
  CVOCs = PCE + TCE + 1,1-DCE + 1,2-DCE + VC
- Pilot Test Groundwater Extraction Well
- Group A (Injection / Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, C-Sand
- Group C (Downgradient Monitoring Well), B-Sand
- Group D (Upgradient Monitoring) Well, B-Sand
- Routine Groundwater Monitoring Well, B-Sand

CDM

Figure 5

The Boeing Company
Former C-6 Facility
Interpreted Extent of CVOCs Distribution - 2007 Baseline Sampling
Former Bldg 1/36 Pilot Test

N

50 25 0 50

Feet

MWB007
(5,458)

10,000 µg/L

MWB006
(17,000)

WCC_03S
(18,974)

Building 1/36

MWB027
(1,121)

AW0055UB
(29,370)

WCC_04S
(4,949)

1,000 µg/L

100 µg/L

AW0067UB
(6)

AW0066UB
(6)

AW0065UB
(319)

AW0064UB
(2,710)

EWB002
(85)

AW0073C
(311)

AW0074UB
(11,500)

AW0077UB
(41)

WCC_06S (See Note 1)
(718)*

AW0076UB
(209)

AW0075UB
(3,359)

WCC_07S
(393)

TMW_08
(1,780)

EWB001
(179)

10,000 µg/L

WCC_12S
(30)

MWB028
(1,186)

MWB003
(9,800)

TMW_07
(1,111)

Knox Street

NOTES: (1) WCC_06S was used as an extraction well temporarily during the pilot test following which it was used as Group B (Performance) Monitoring Well per the WDR Permit.
(2) September 2009 results are shown for all wells except for wells EWB001, TMW_008, MWB003 and MWB028 where March 2009 results are used.
* Concentration not considered in contouring.

Legend

- Compound
- CVOCs - 100 µg/L
- CVOCs - 1,000 µg/L (Dashed where Inferred)
- CVOCs - 10,000 µg/L (Dashed where inferred)
- Conveyance
- Vault
- (120) CVOCs µgL

CVOCs = PCE + TCE + 1,1-DCE + 1,2-DCE + VC

- Pilot Test Groundwater Extraction Well
- Group A (Injection / Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, B-Sand
- Group B (Performance Monitoring) Well, C-Sand
- Group C (Downgradient Monitoring Well), B-Sand
- Group D (Upgradient Monitoring) Well, B-Sand
- Routine Groundwater Monitoring Well, B-Sand

CDM

Figure 6

The Boeing Company
Former C-6 Facility
Interpreted Extent of CVOCs Distribution - September 2009 Sampling
Former Bldg 1/36 Area

Appendix A
WDR Monitoring Data Trends for Key Pilot Test Wells

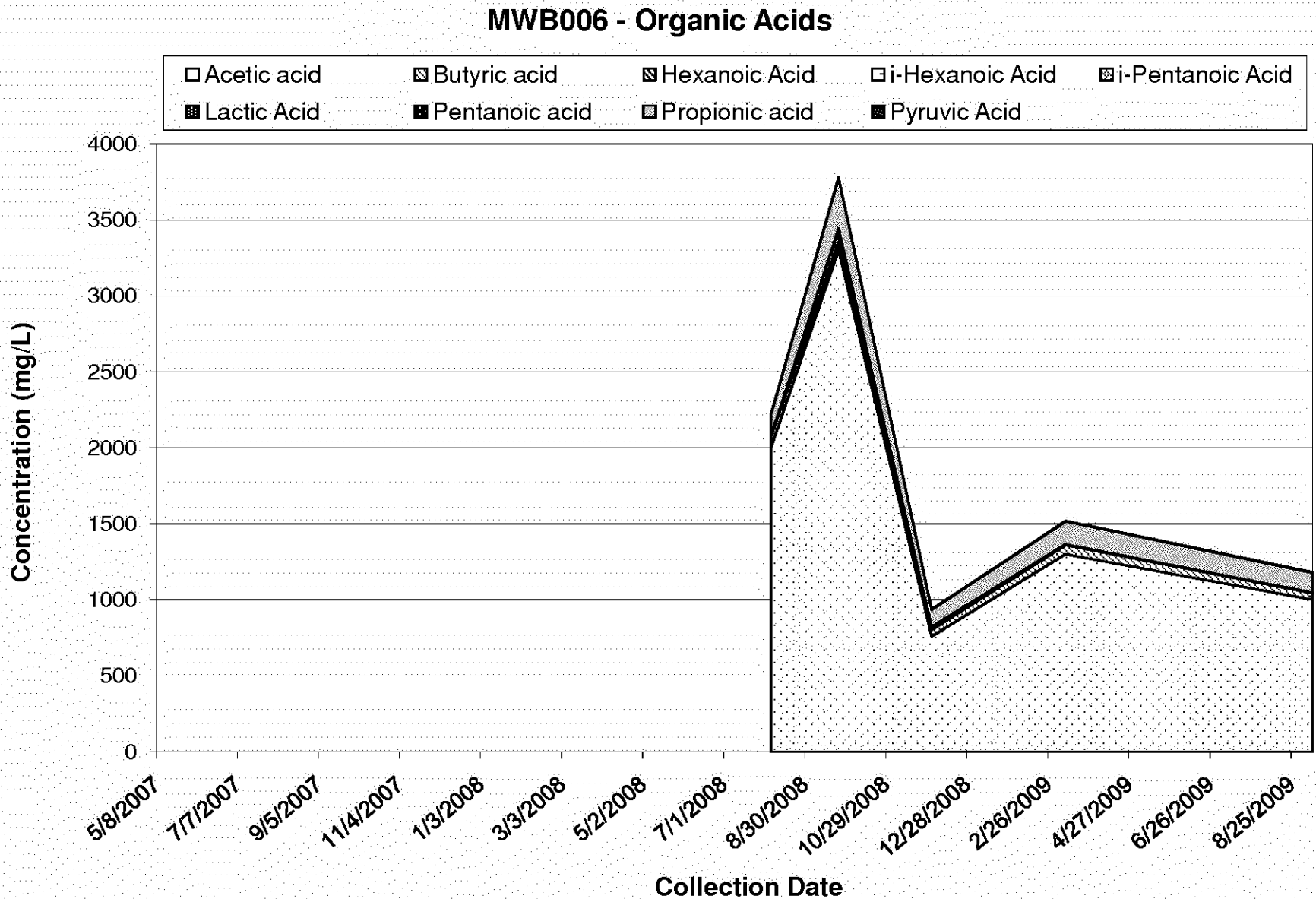
Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

- **Electron Donor Parameters - VFAs**
- **Electron Donor Parameters - TOC**
- **Key Redox Parameters (Electron Acceptors) - Nitrate, Ferrous Iron, Sulfate, and Methane**
- **Dechlorinating Bacteria (qPCR data for DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA)**
- **Molar Concentrations of CVOCs (PCE, TCE, 1,1-DCE, 1,2-DCE, and VC) and Ethene**
- **Mass Concentrations of CVOCs (PCE, TCE, 1,1-DCE, 1,2-DCE, and VC) and Ethene**
- **Other VOCs of Interest (Acetone, MEK, and Toluene)**

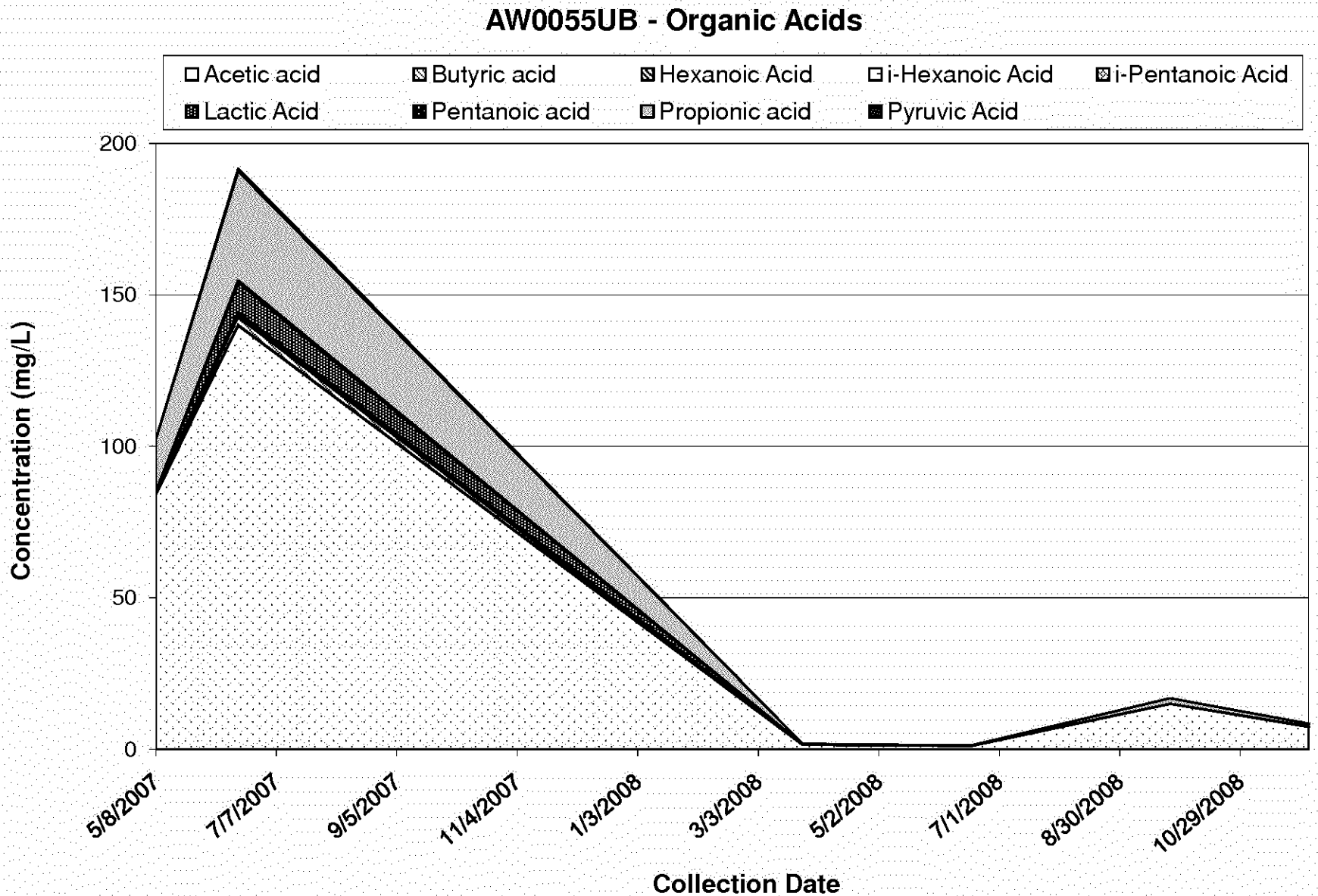
Electron Donor Parameters - VFAs

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

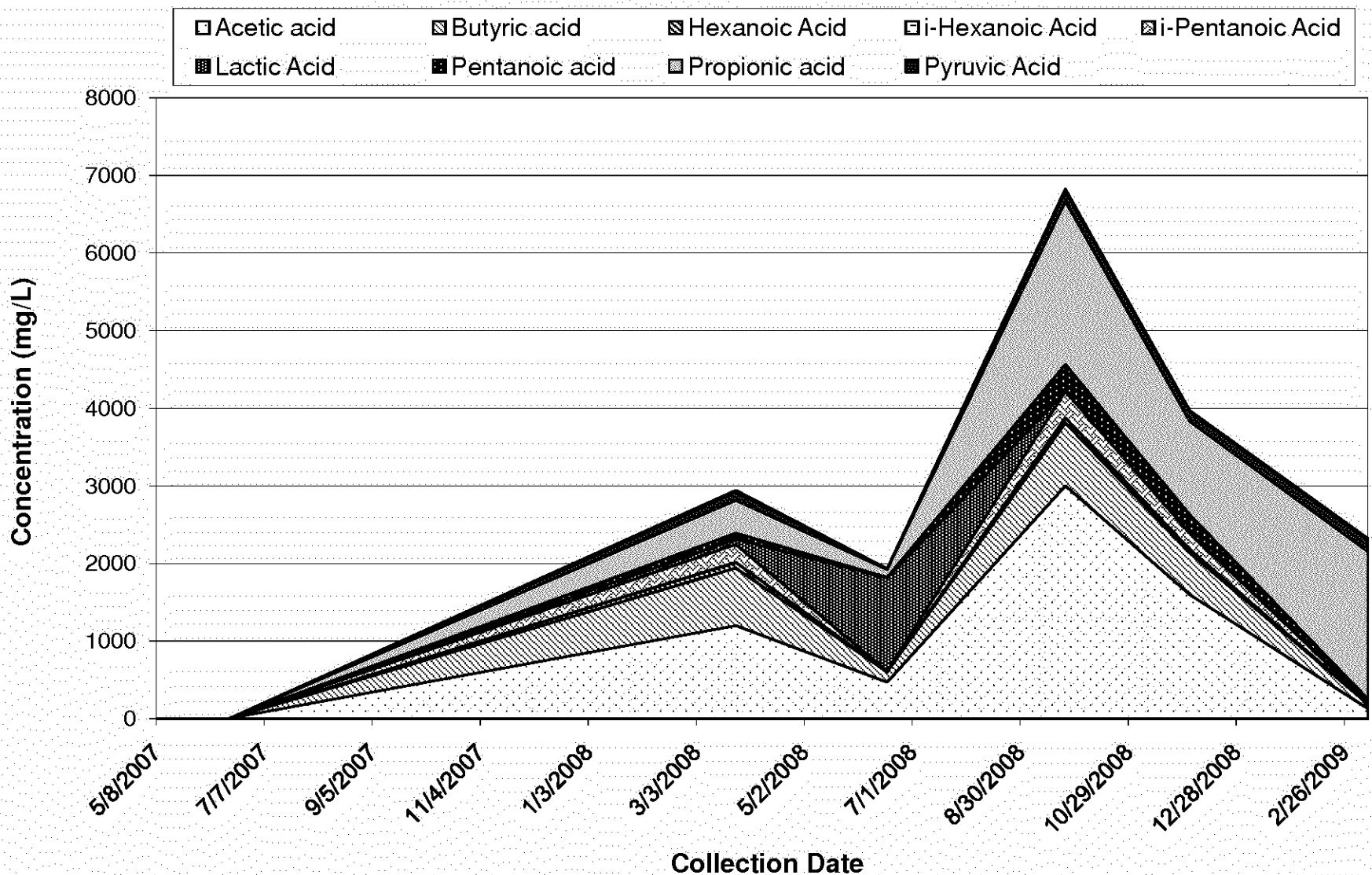


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

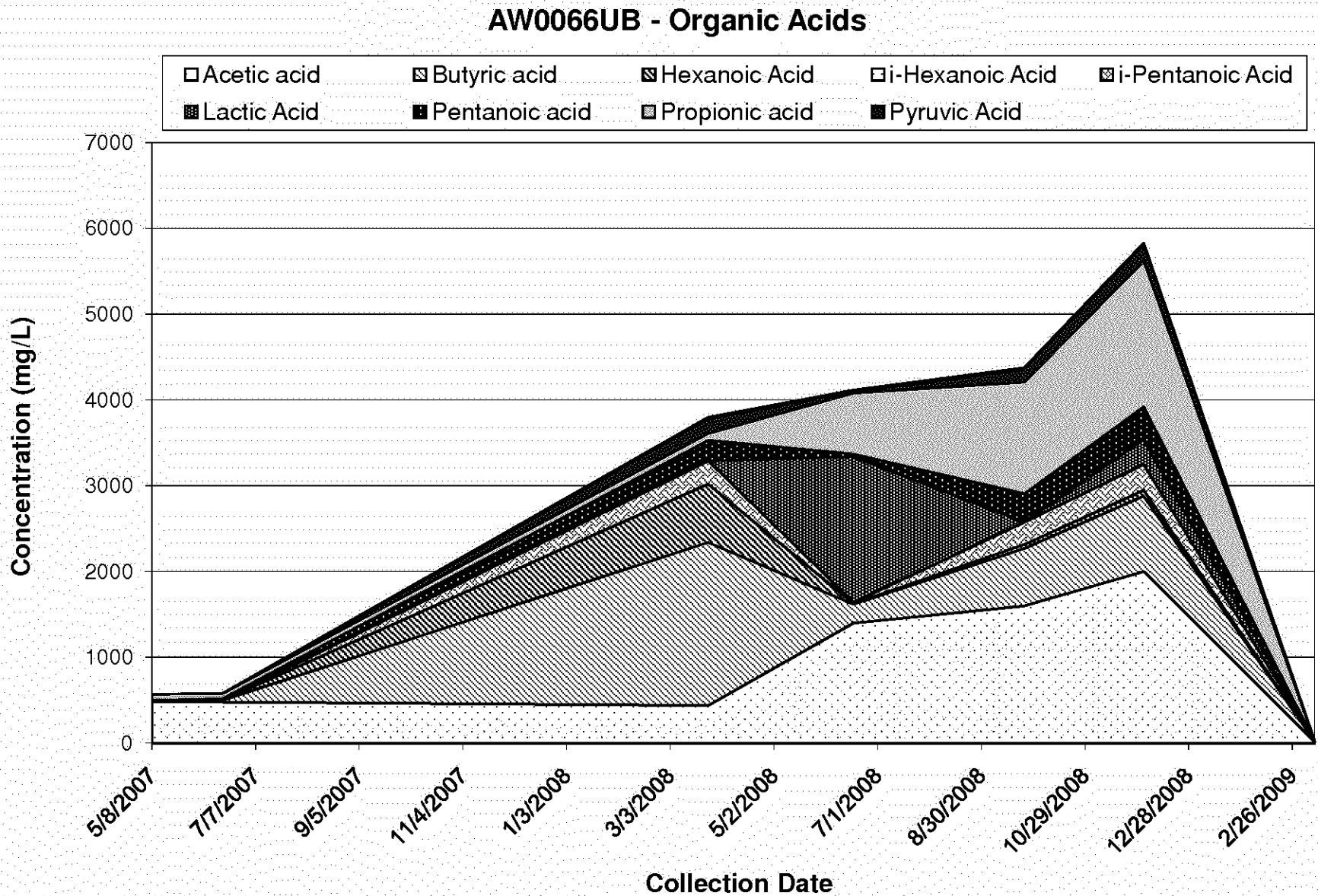


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB - Organic Acids

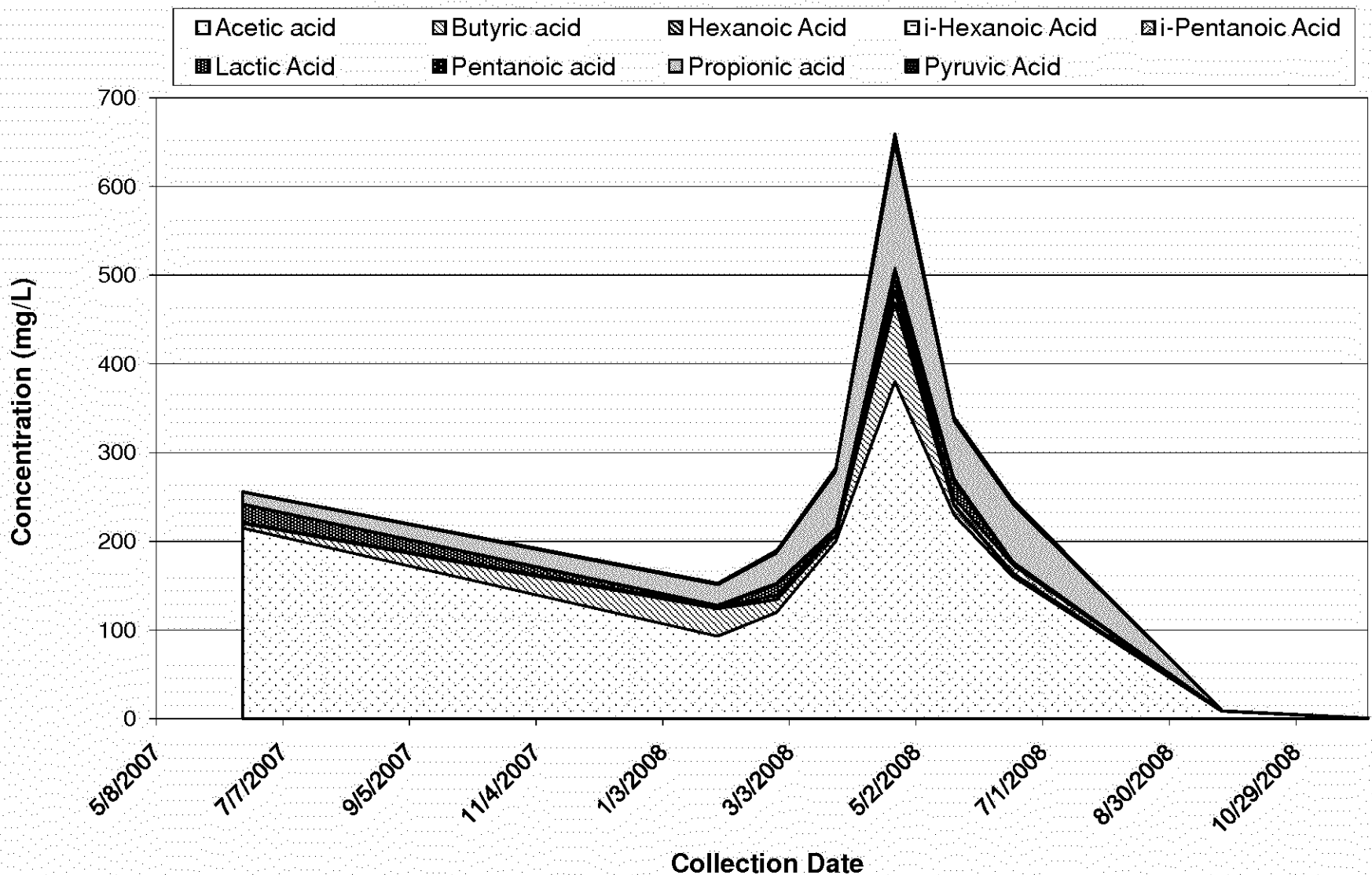


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



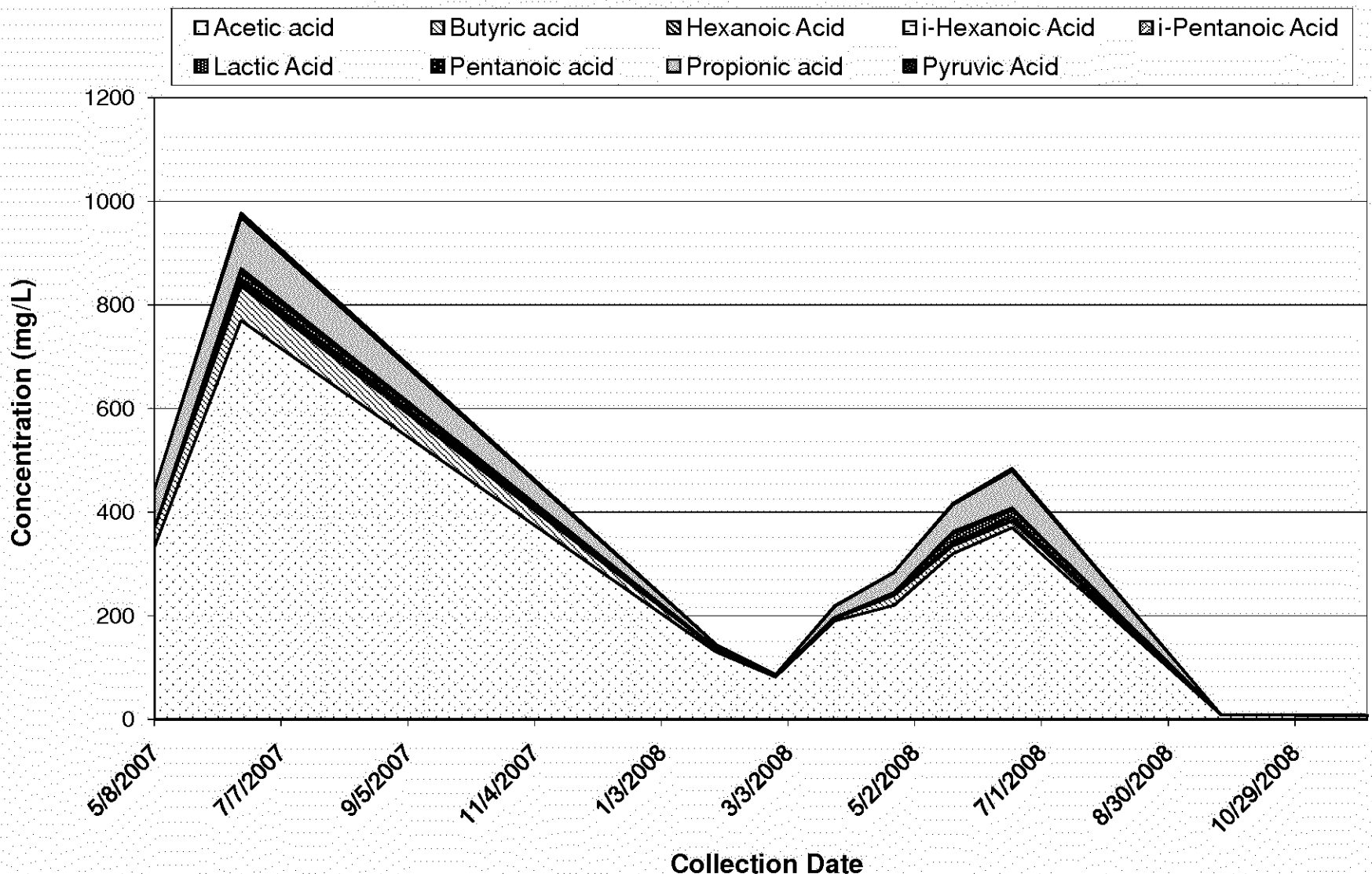
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - Organic Acids



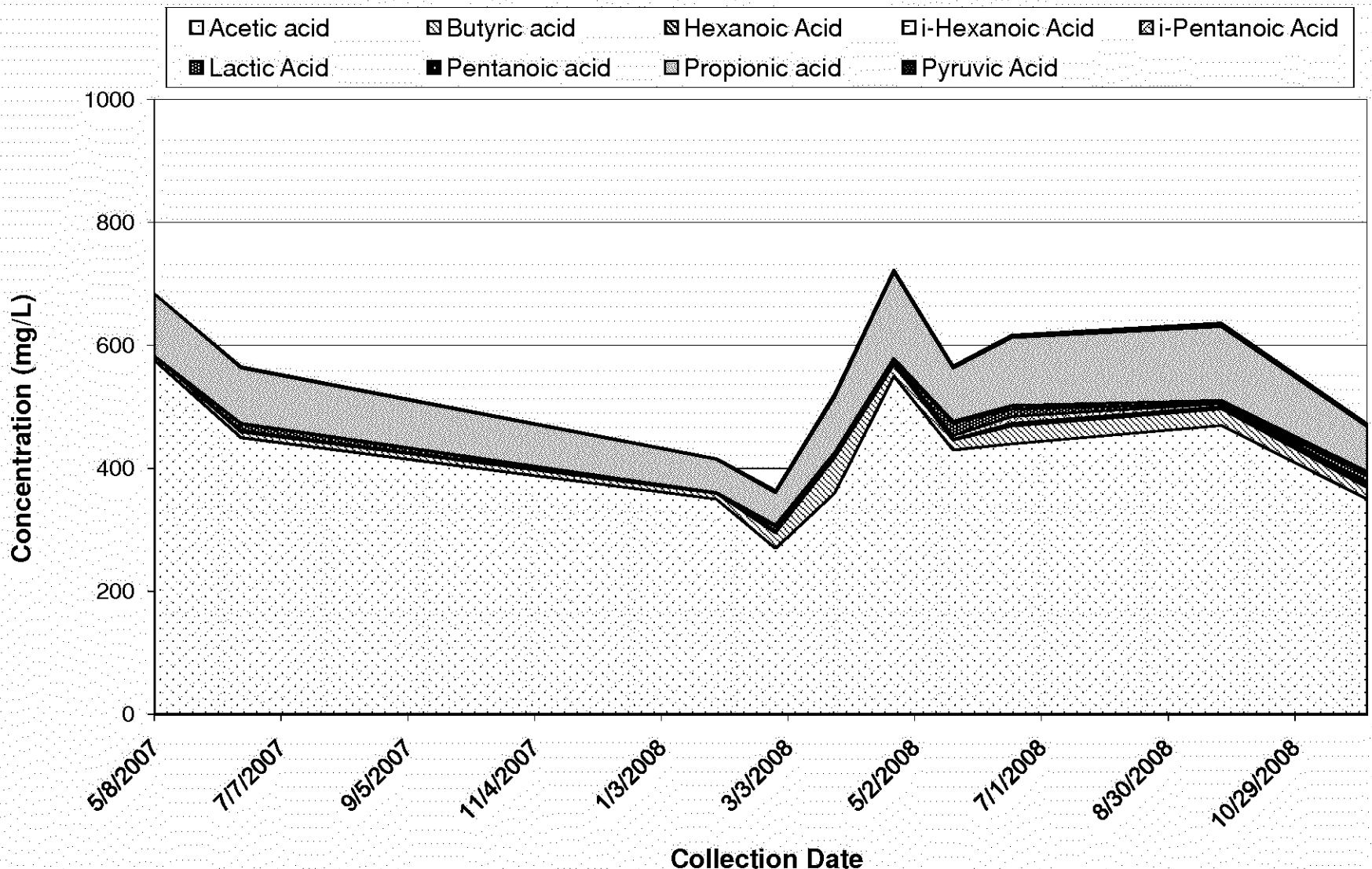
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - Organic Acids



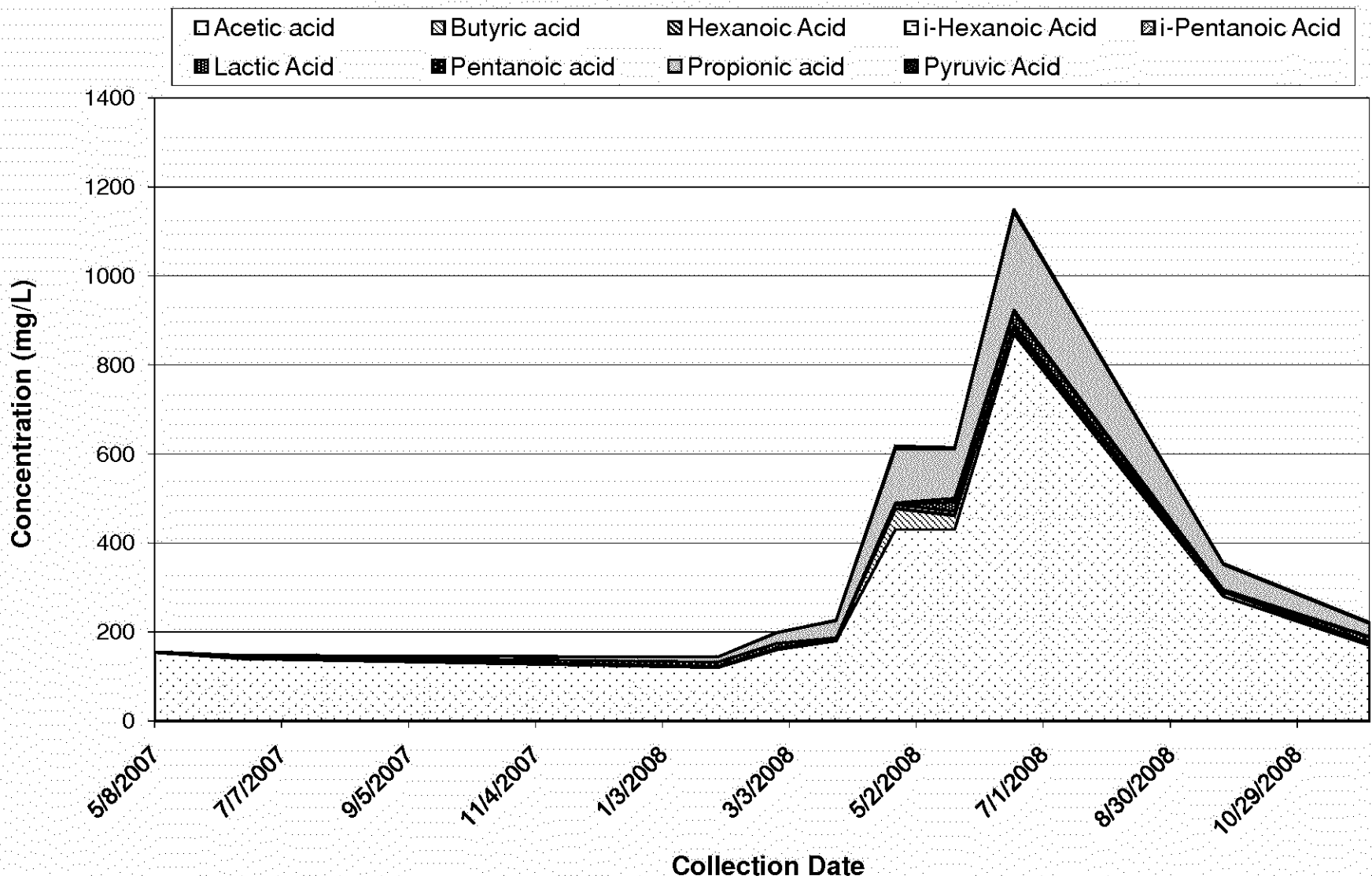
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - Organic Acids



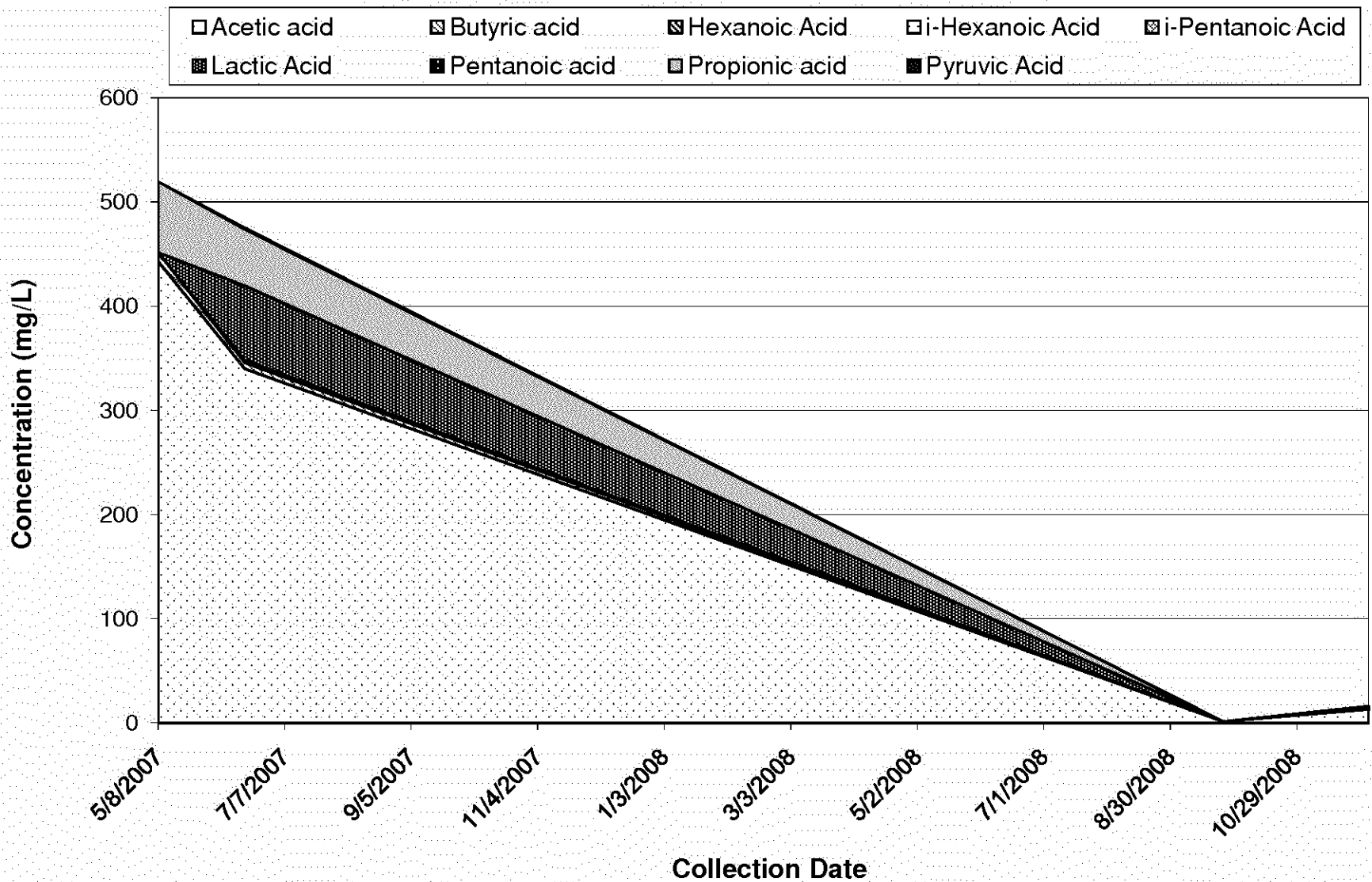
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0075UB - Organic Acids



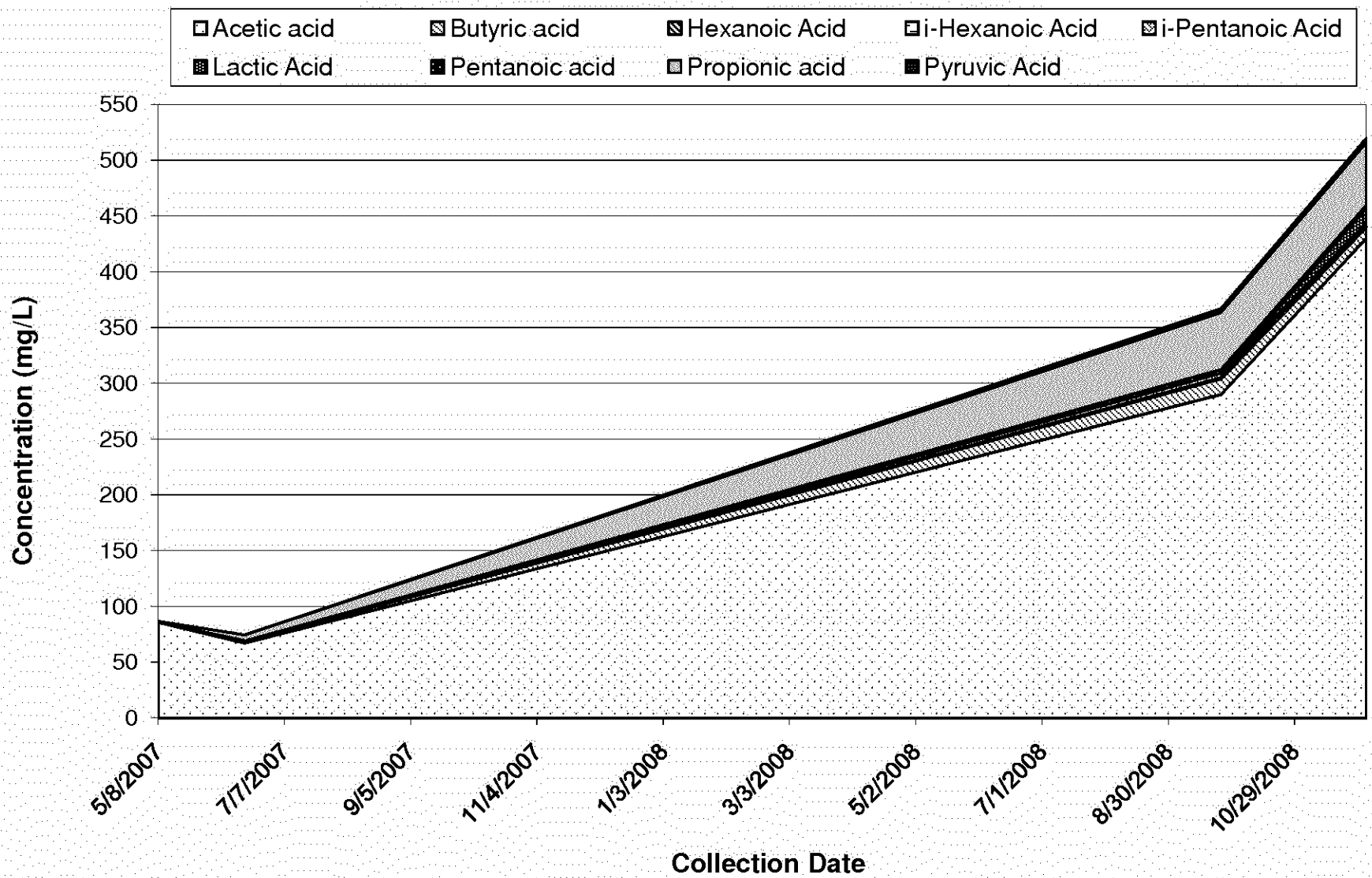
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0065UB - Organic Acids



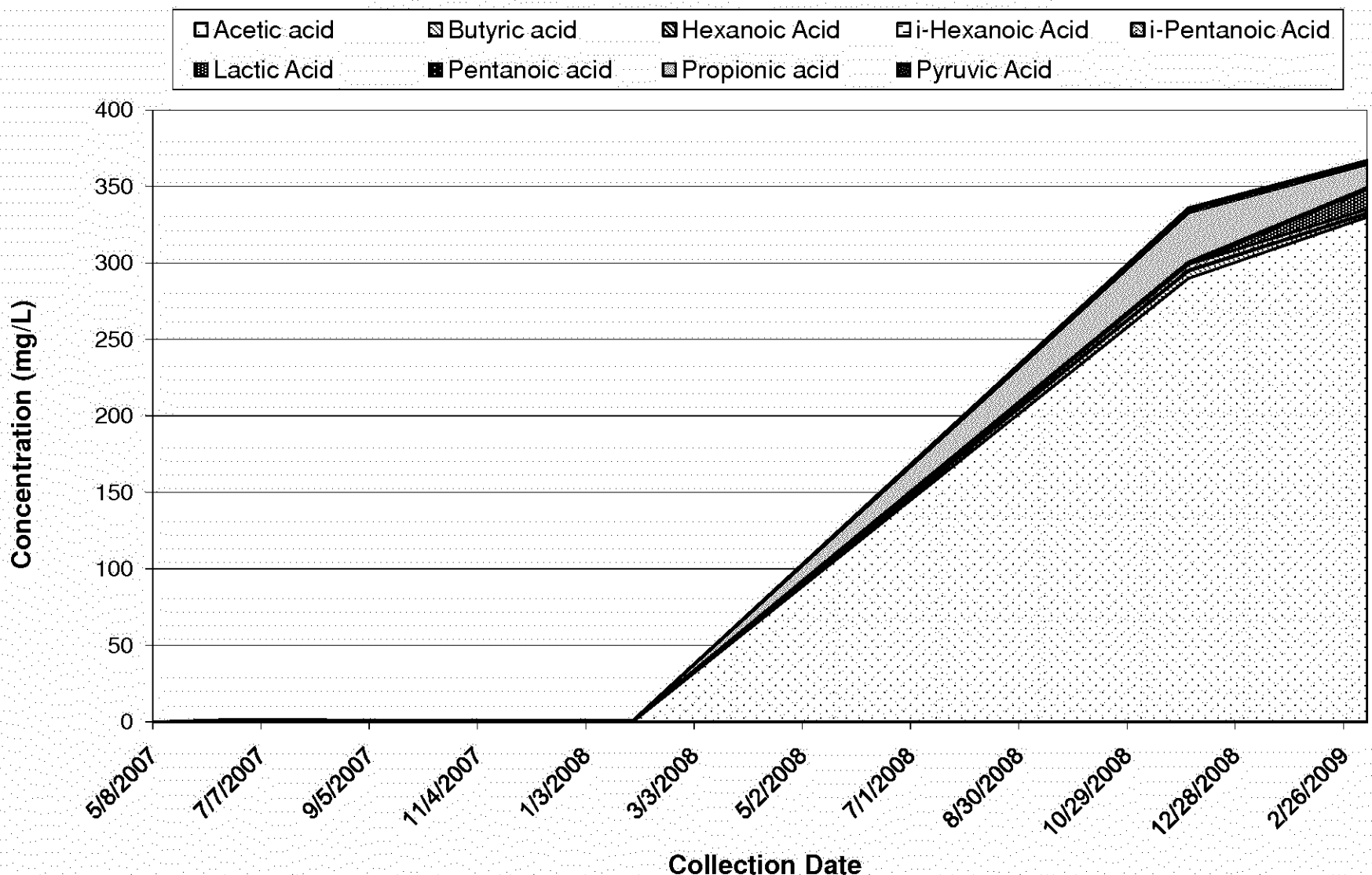
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0064UB - Organic Acids

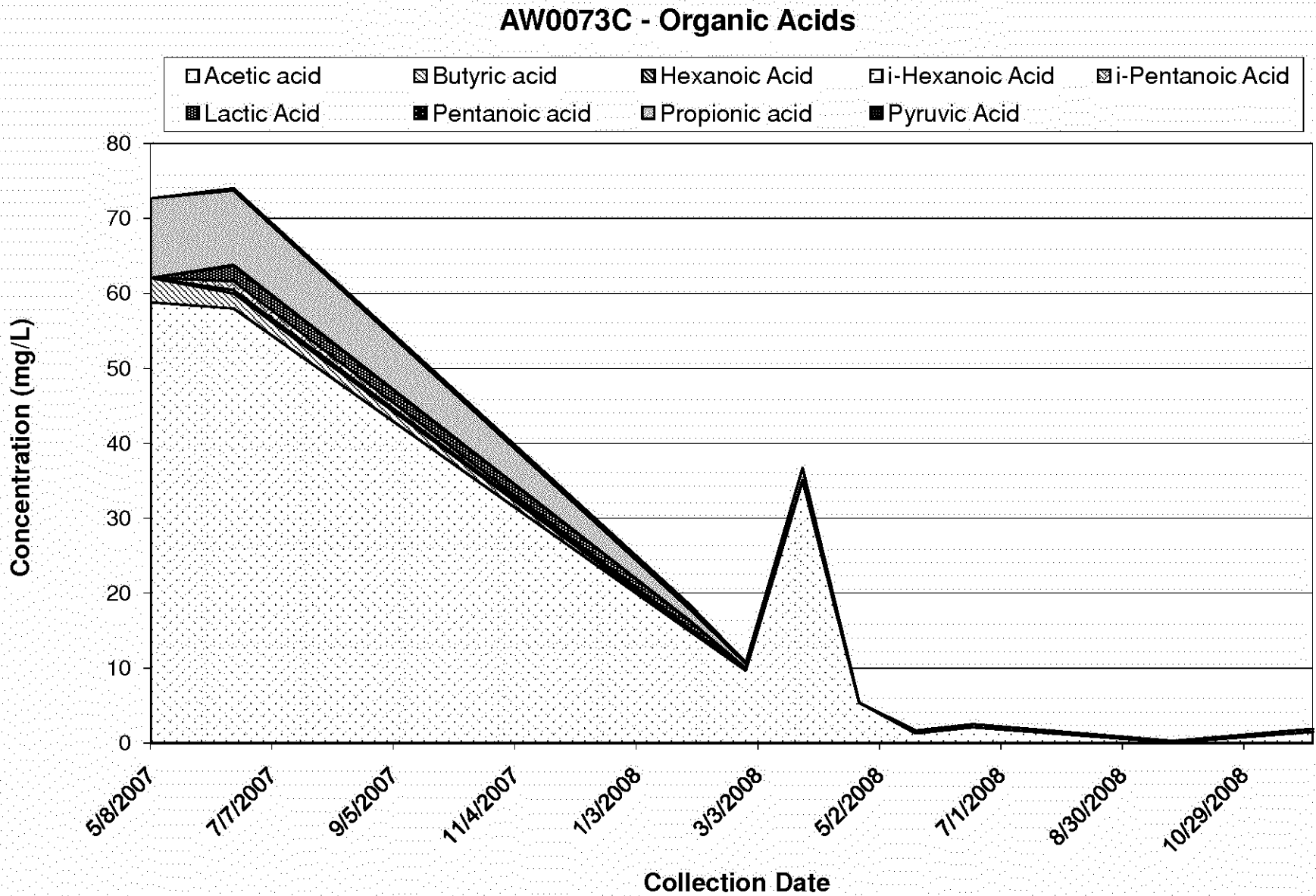


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - Organic Acids



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

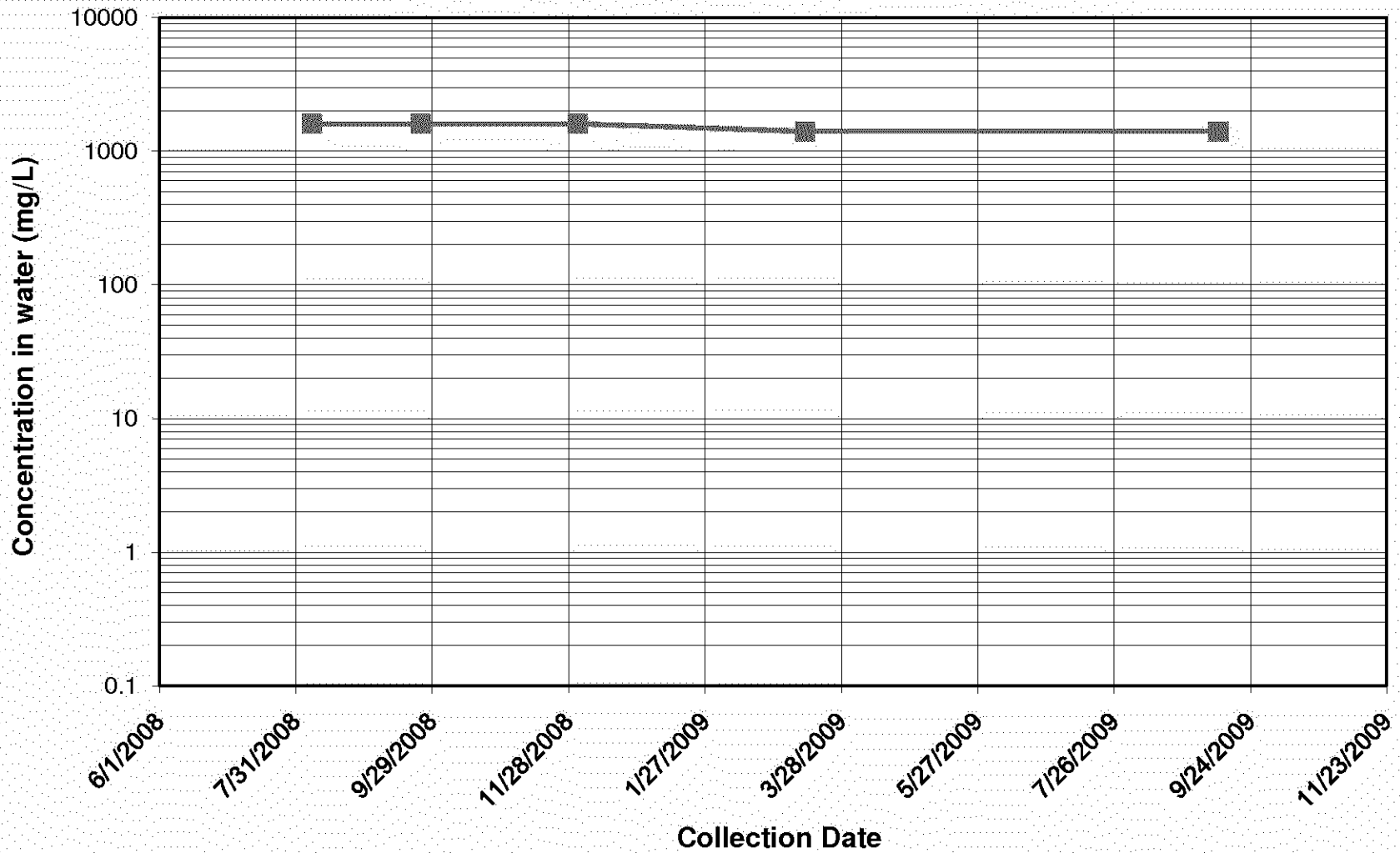


Electron Donor Parameters - TOC

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

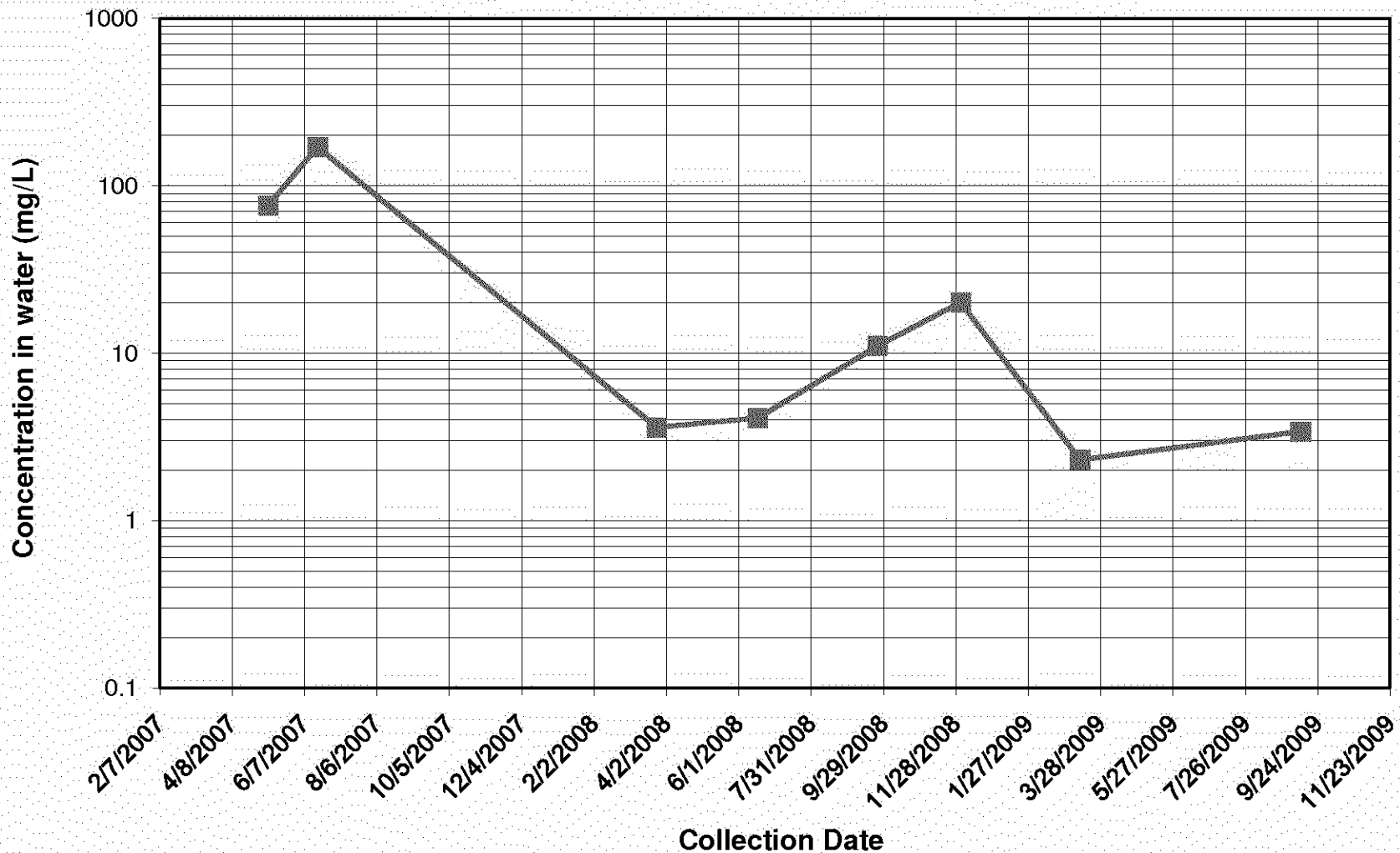
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

MWB006 - TOC



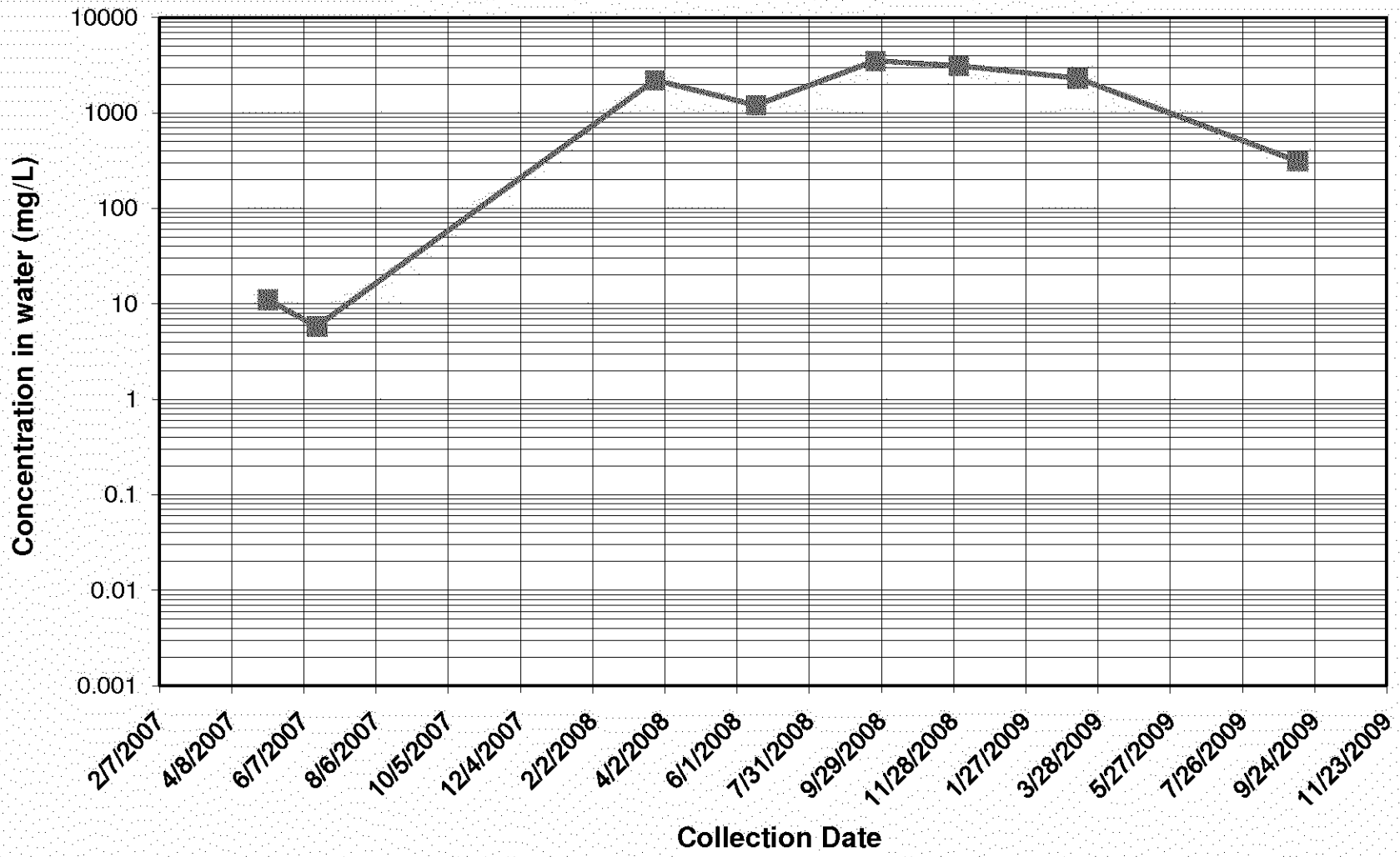
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0055UB - TOC



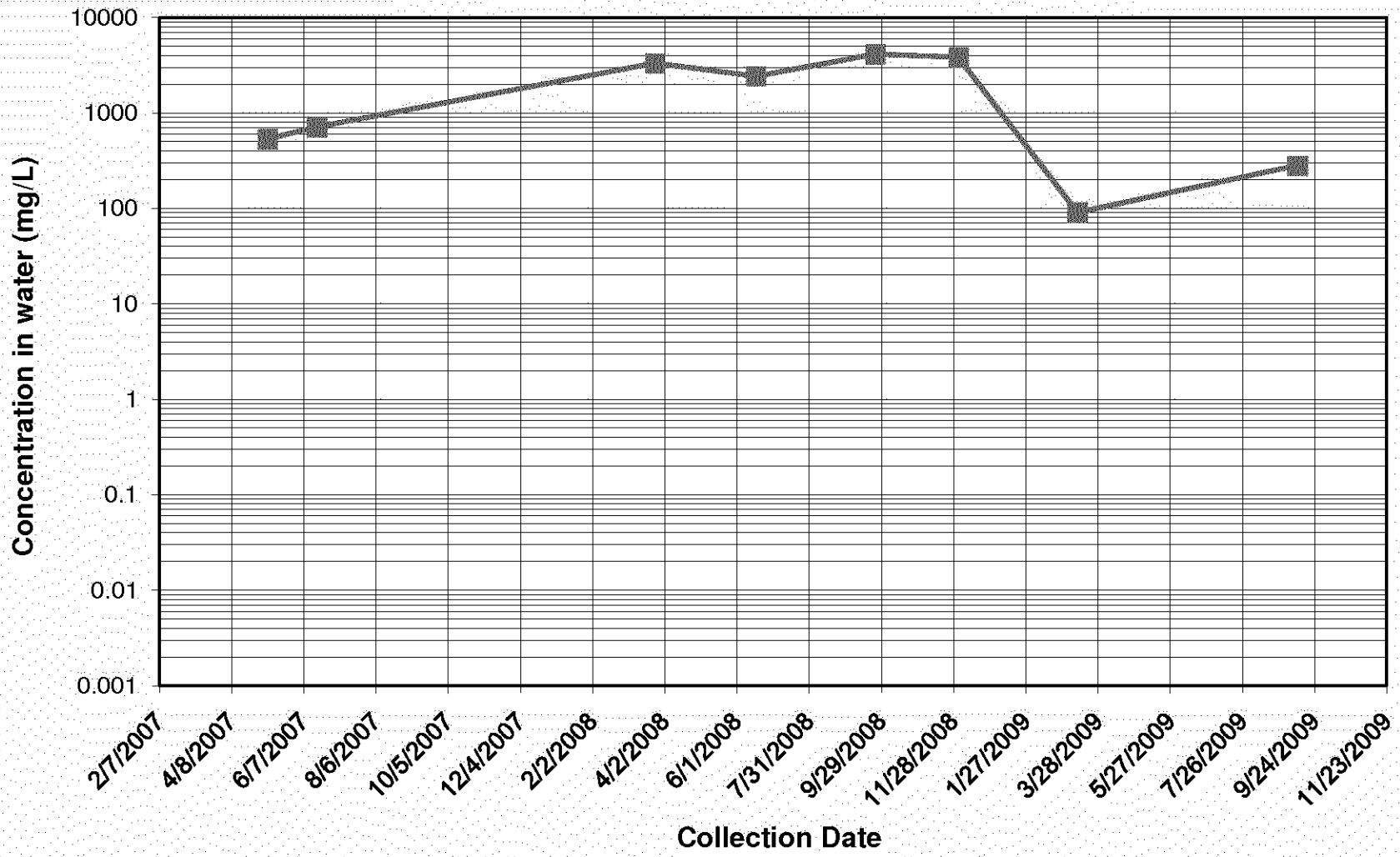
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB - TOC



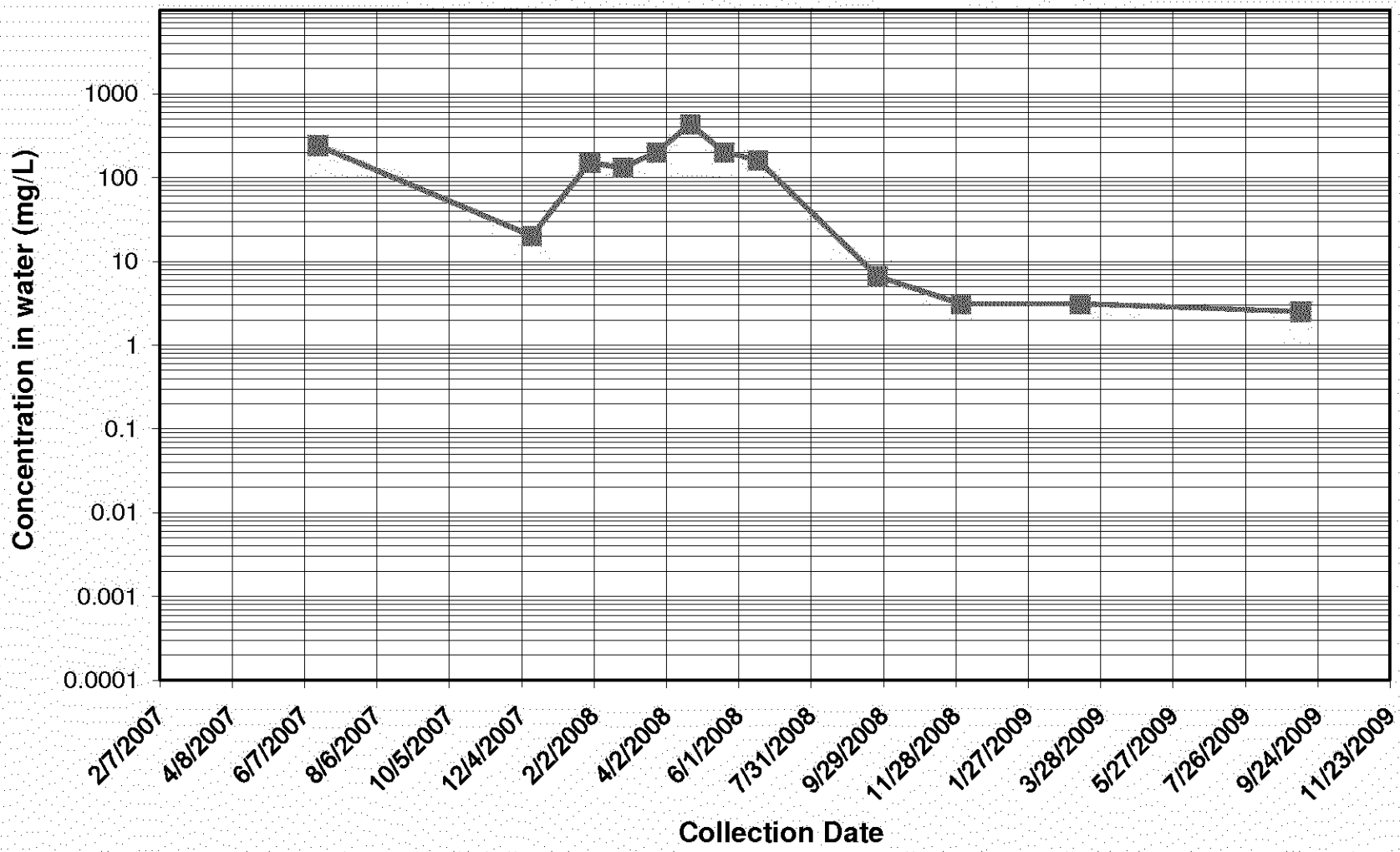
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0066UB - TOC



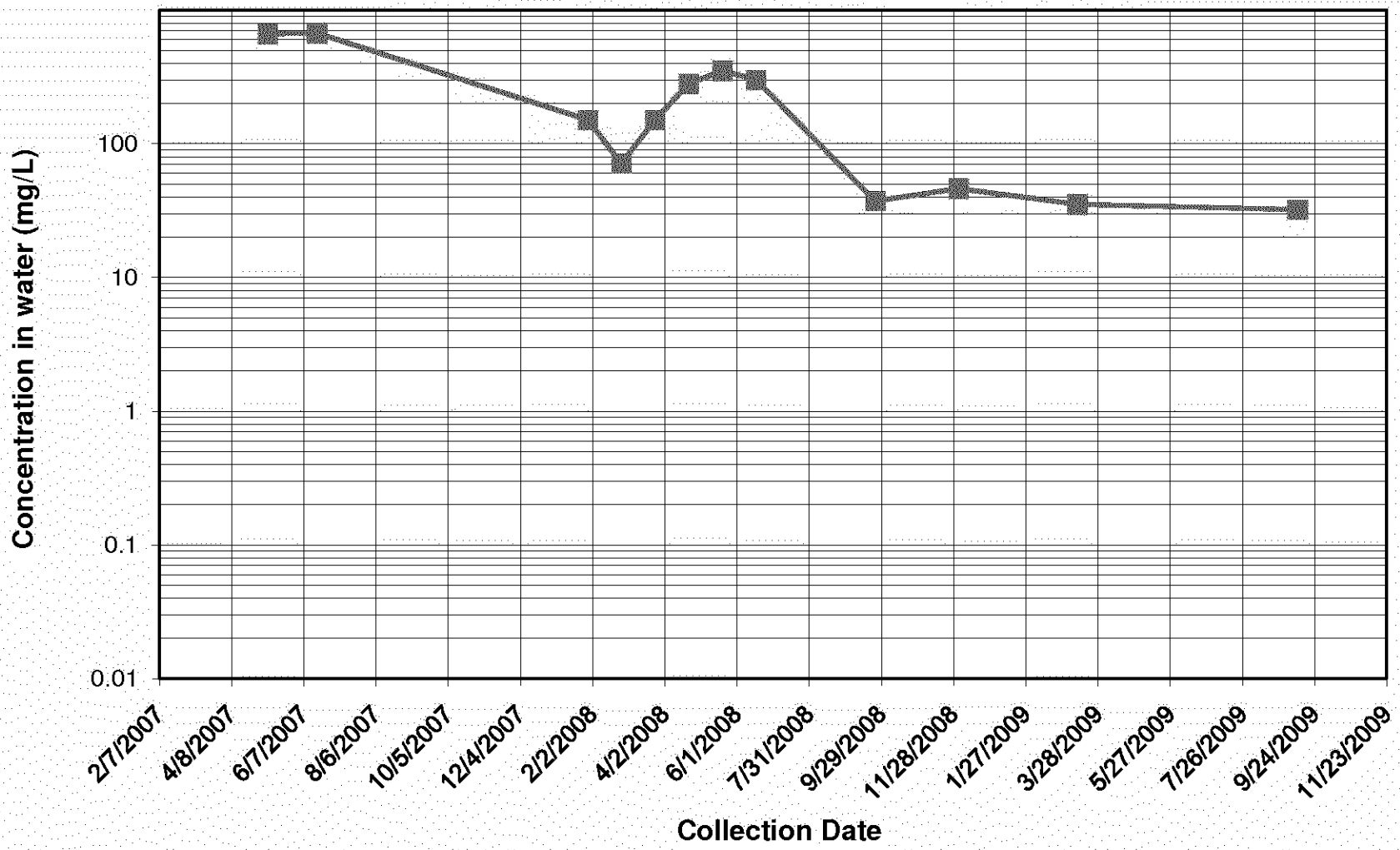
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - TOC



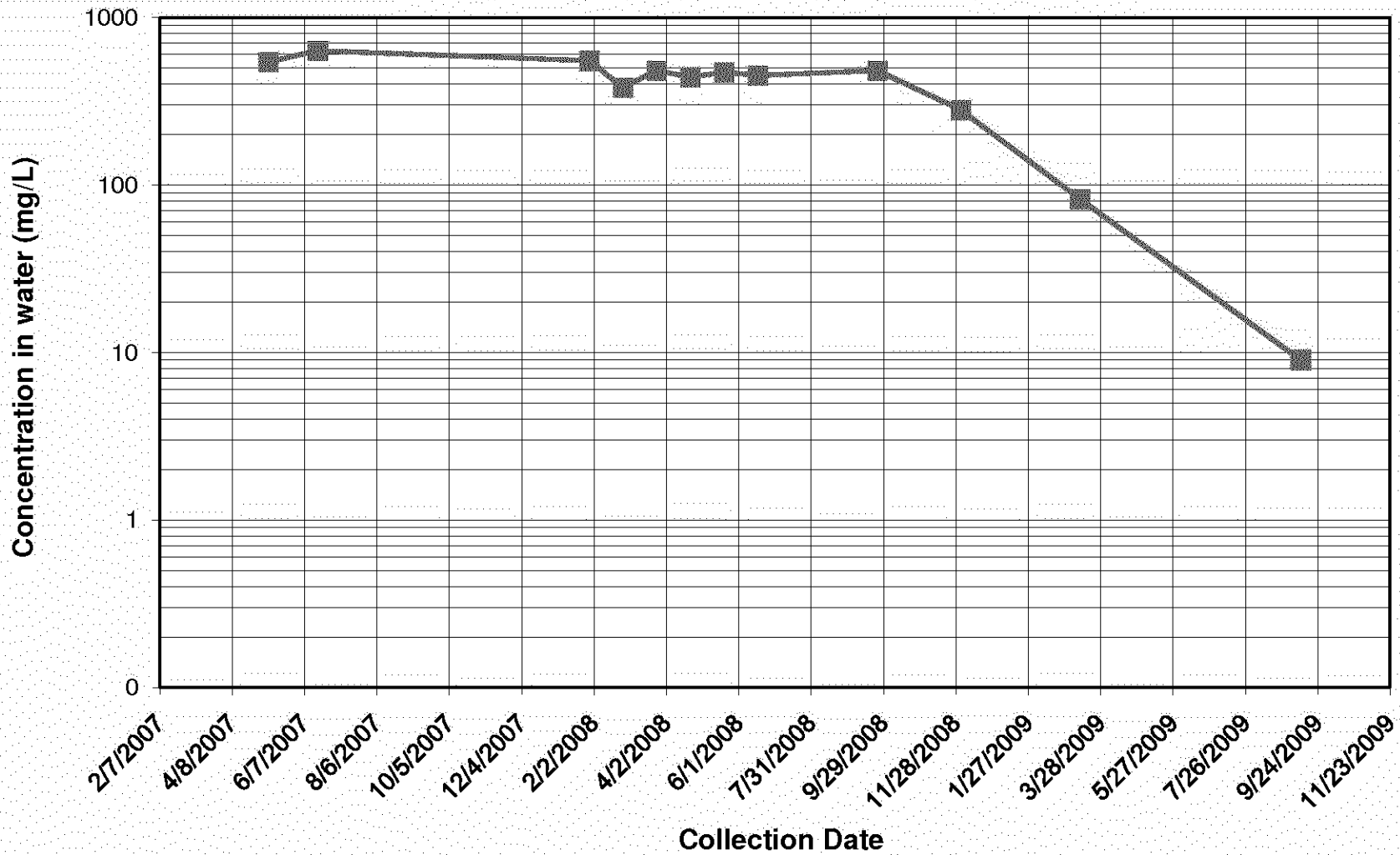
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - TOC



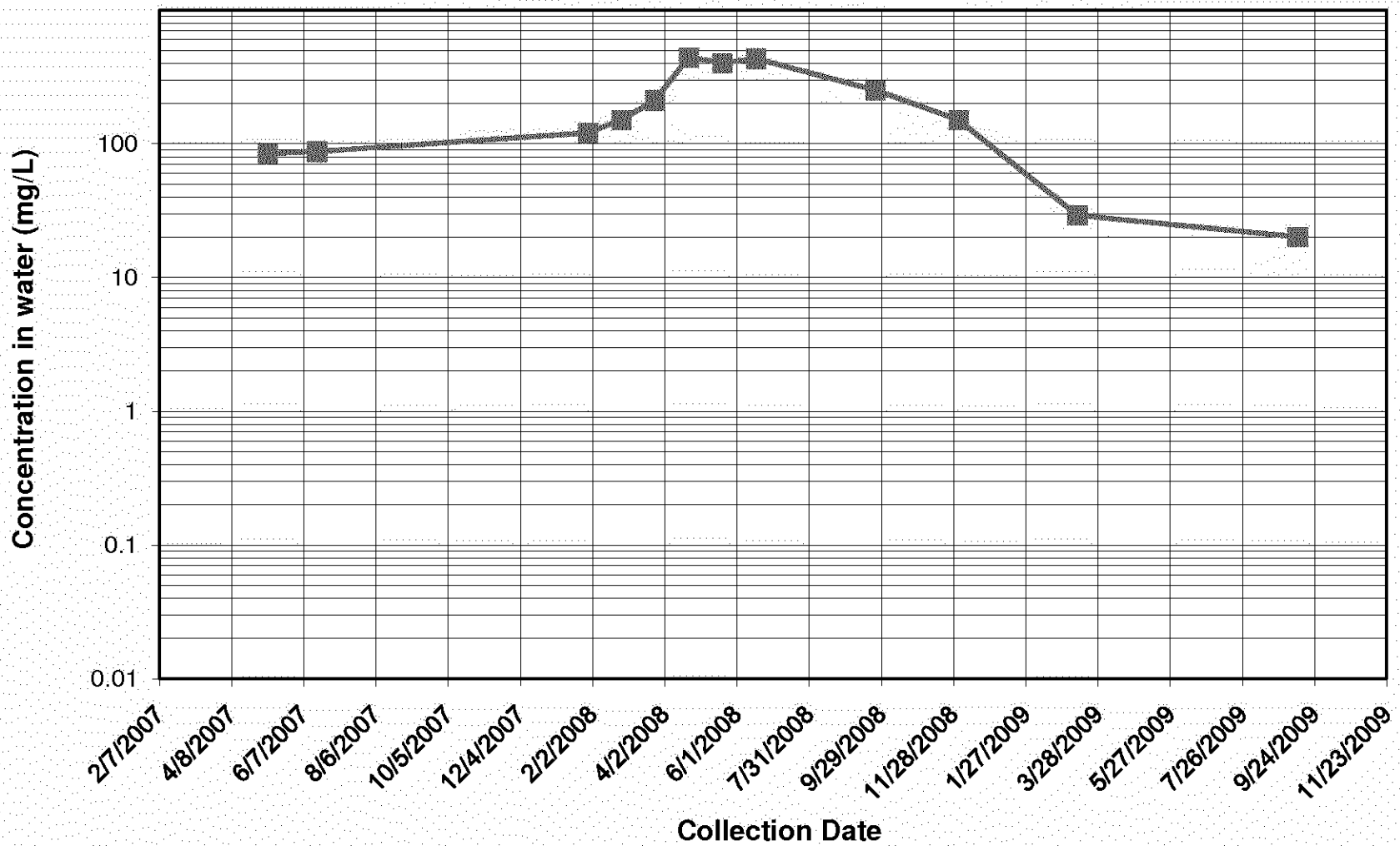
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - TOC



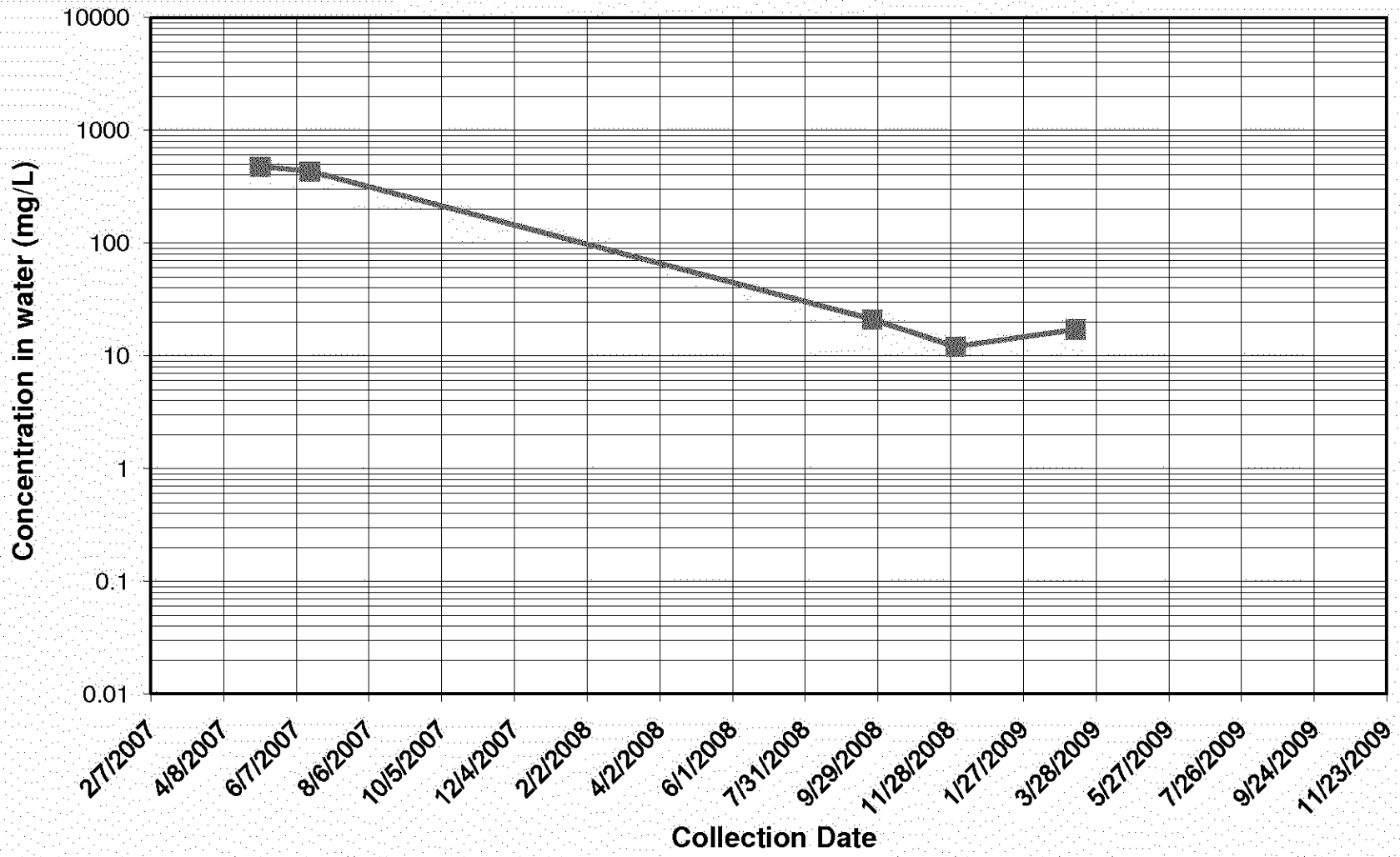
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0075UB - TOC



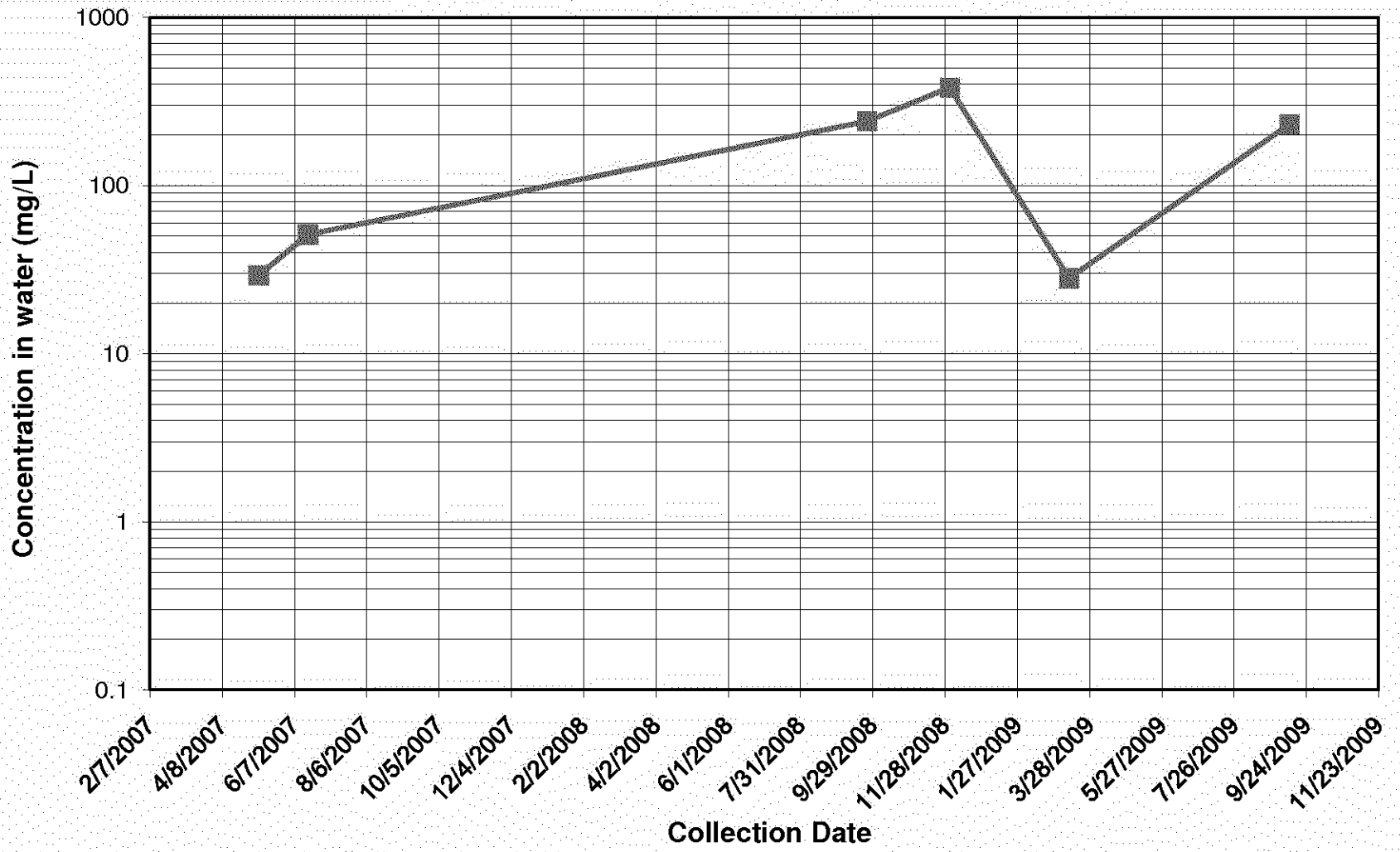
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0065UB - TOC



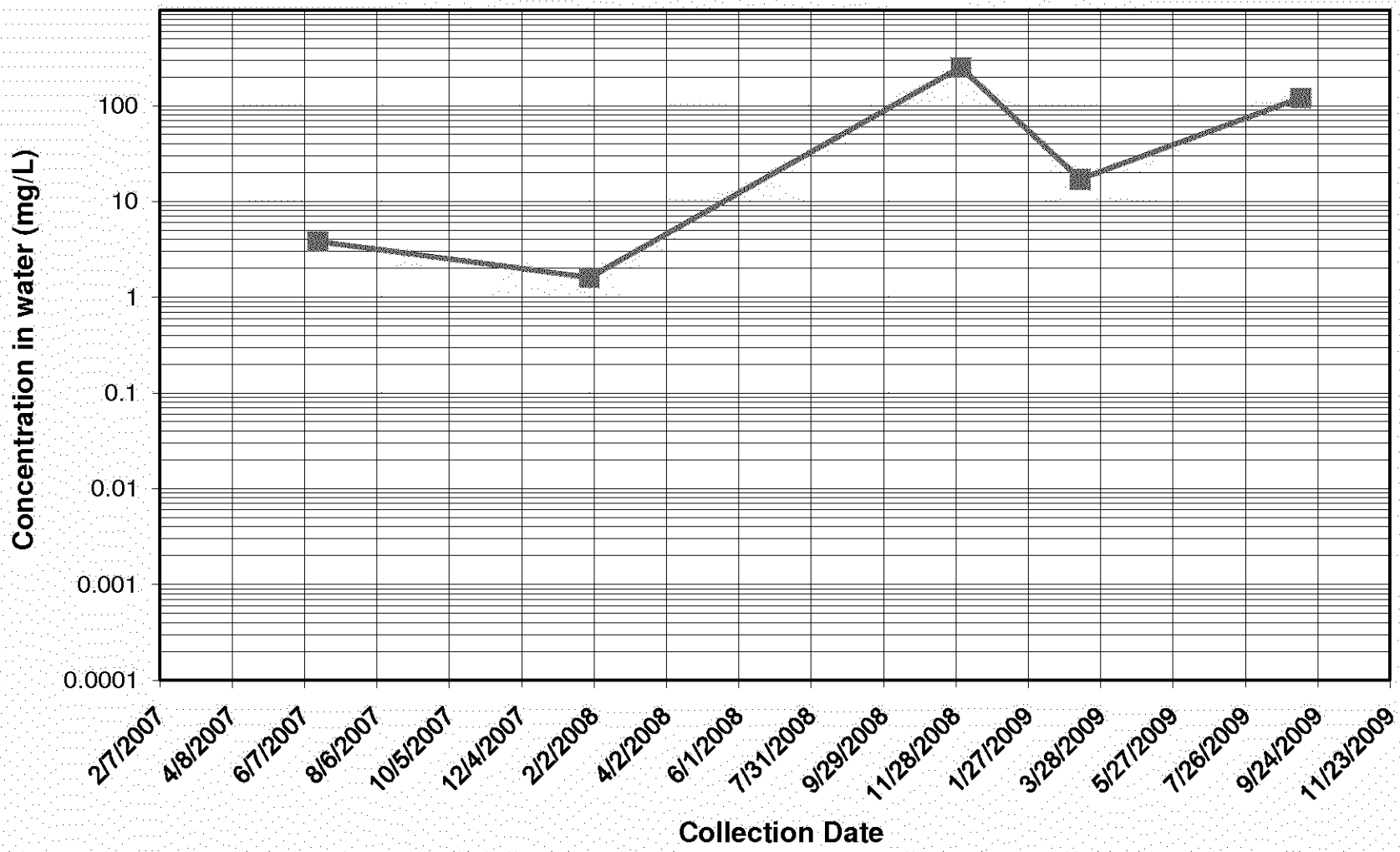
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0064UB - TOC



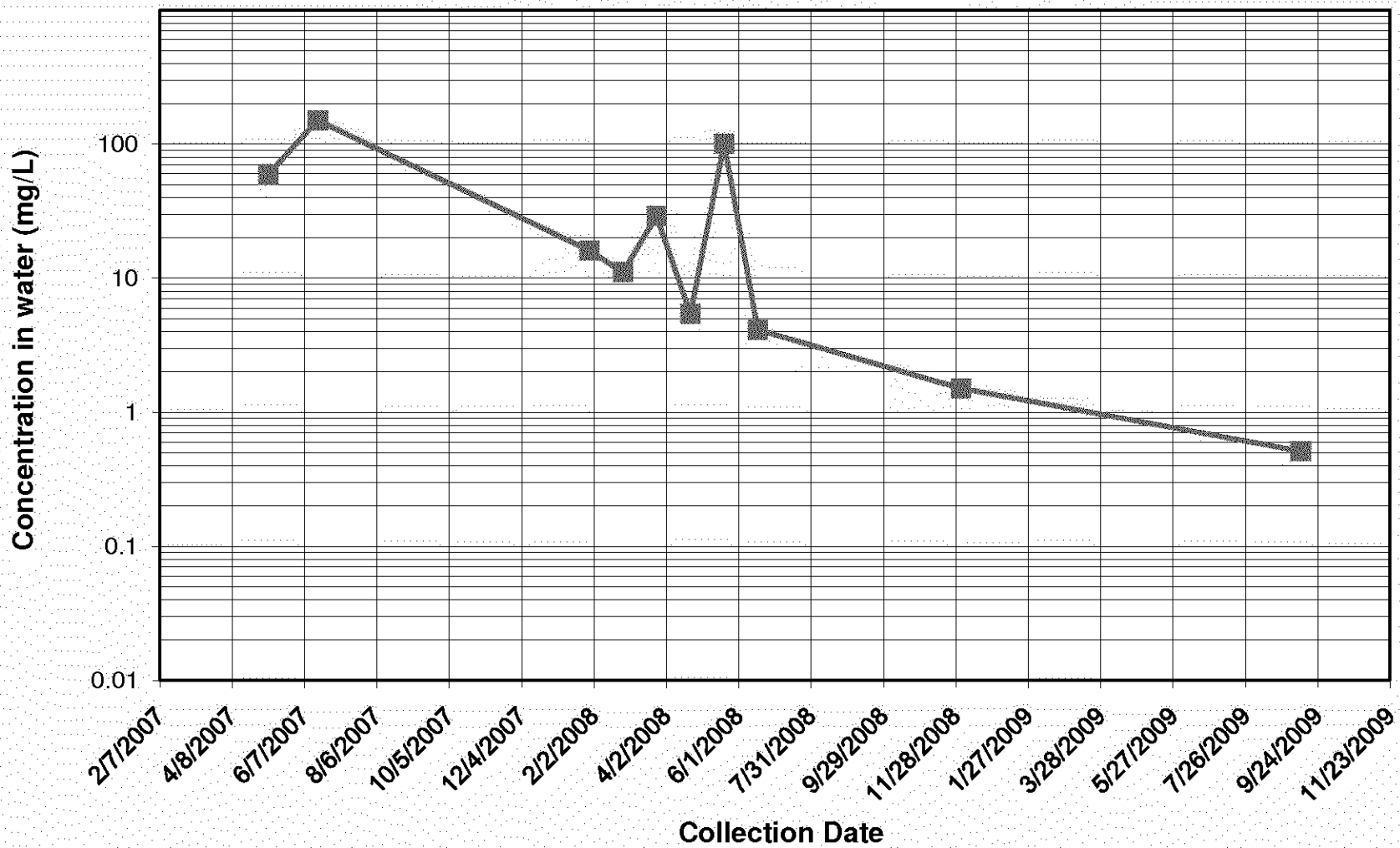
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - TOC



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

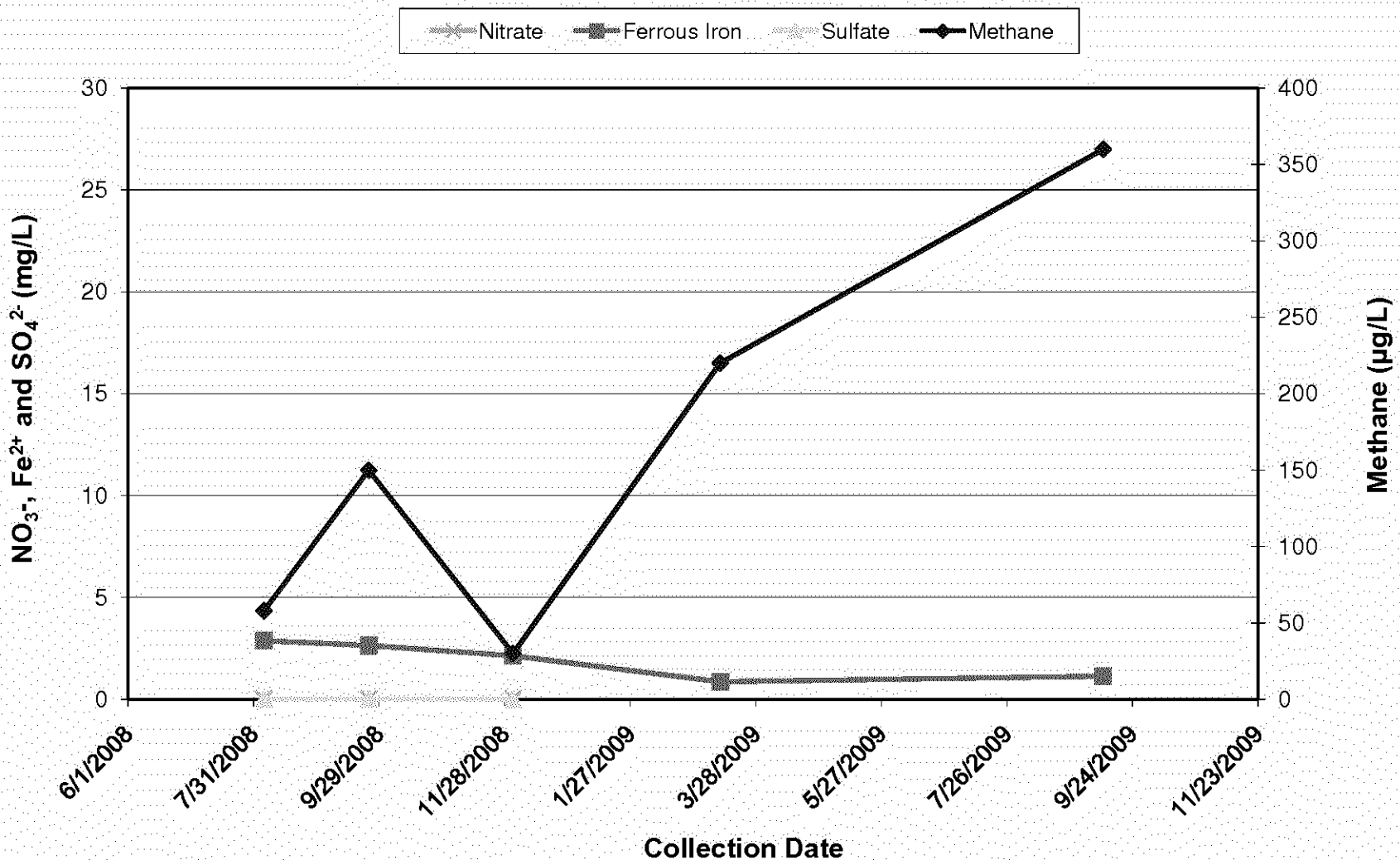
AW0073C - TOC



Key Redox Parameters (Electron Acceptors) Nitrate, Ferrous Iron, Sulfate, and Methane

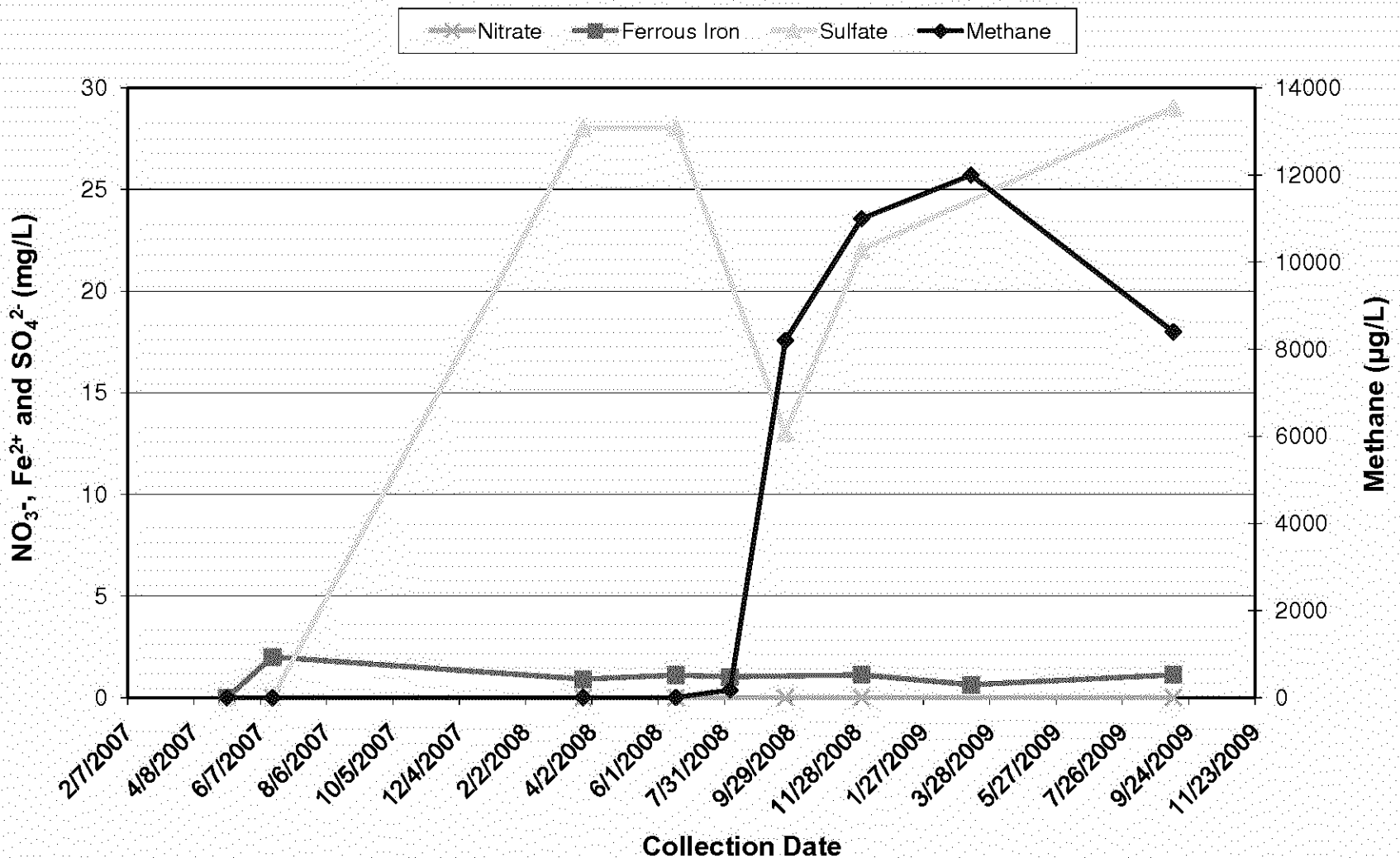
Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



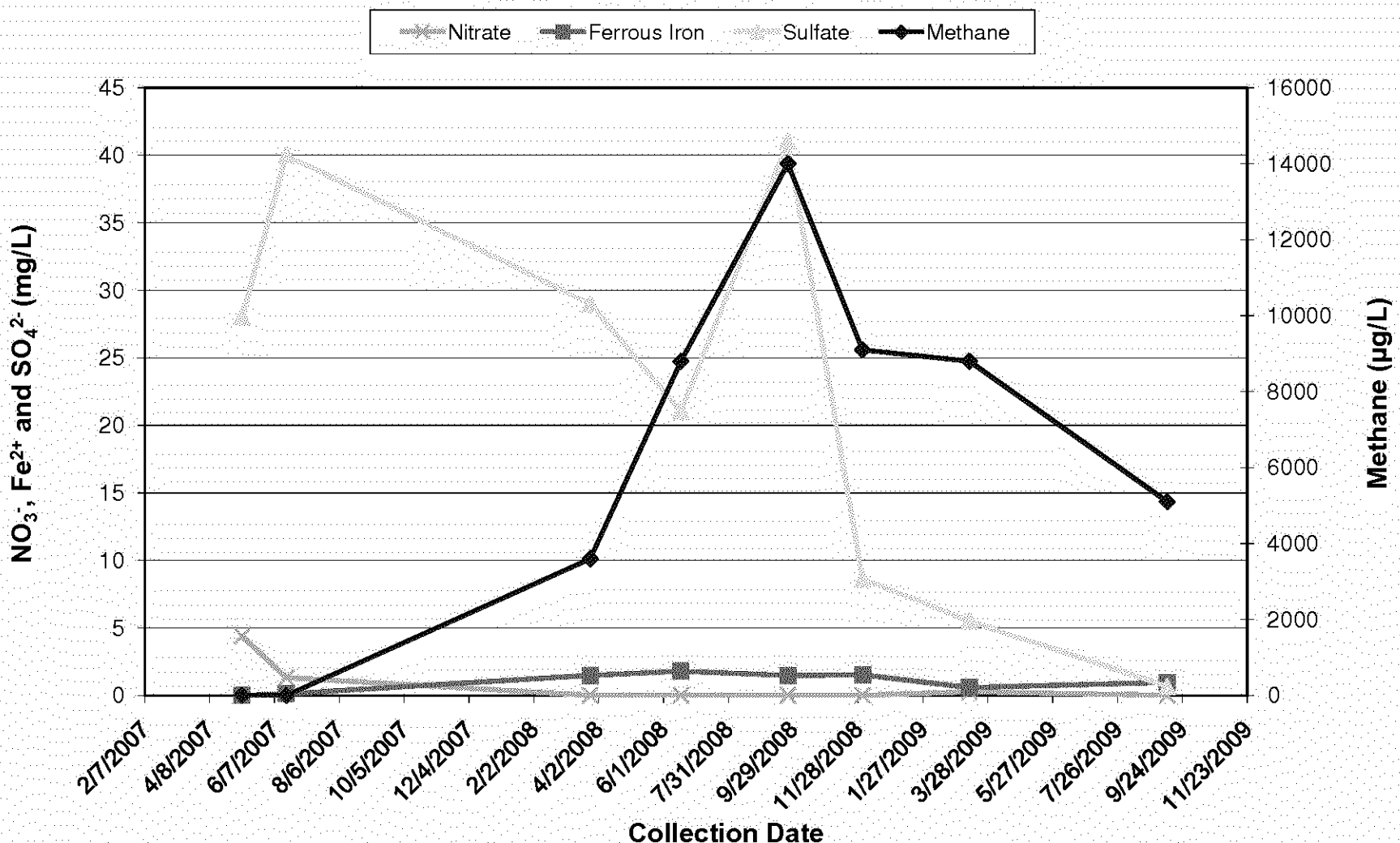
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0055UB - Electron Acceptors



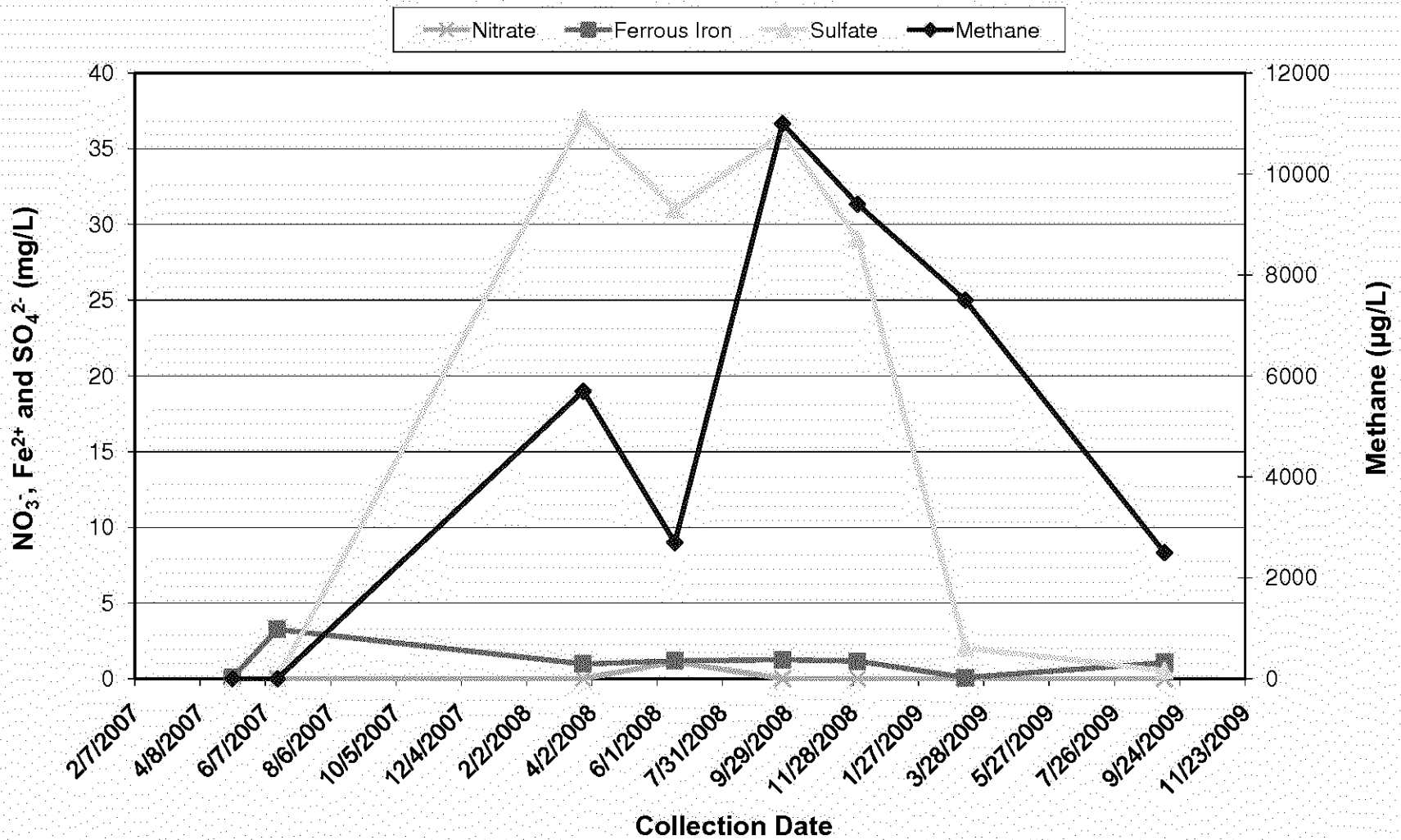
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB - Electron Acceptors



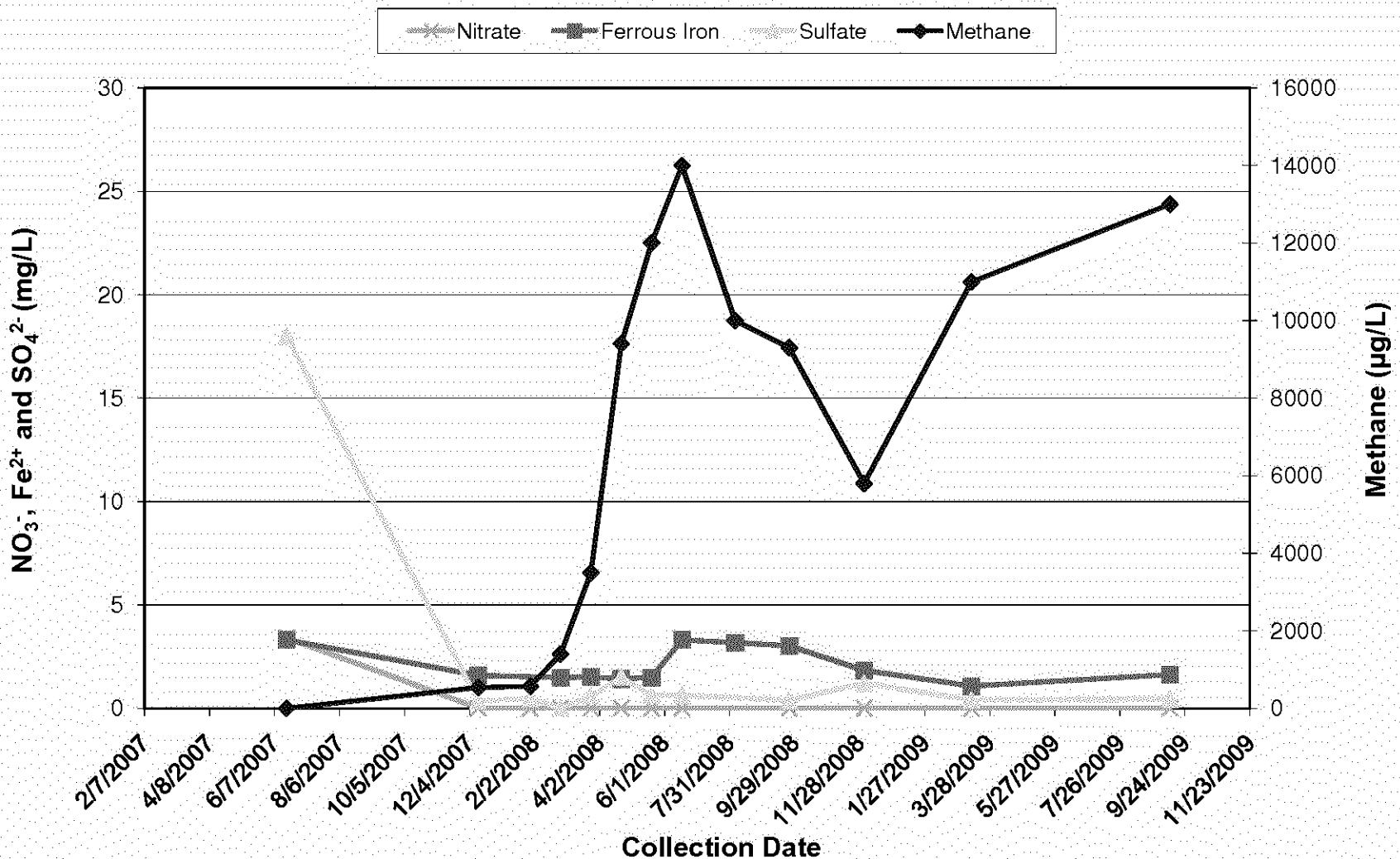
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0066UB - Electron Acceptors



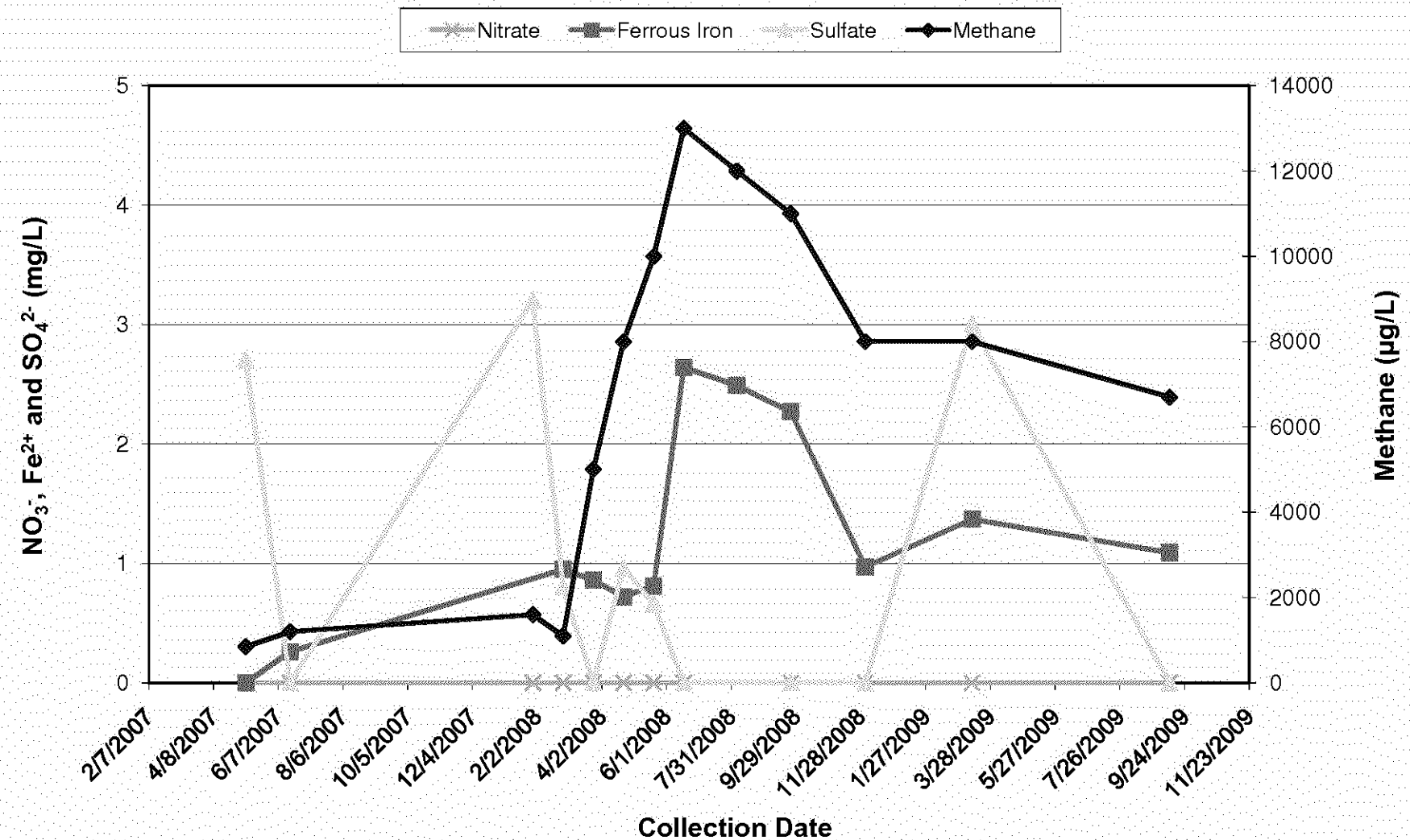
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - Electron Acceptors



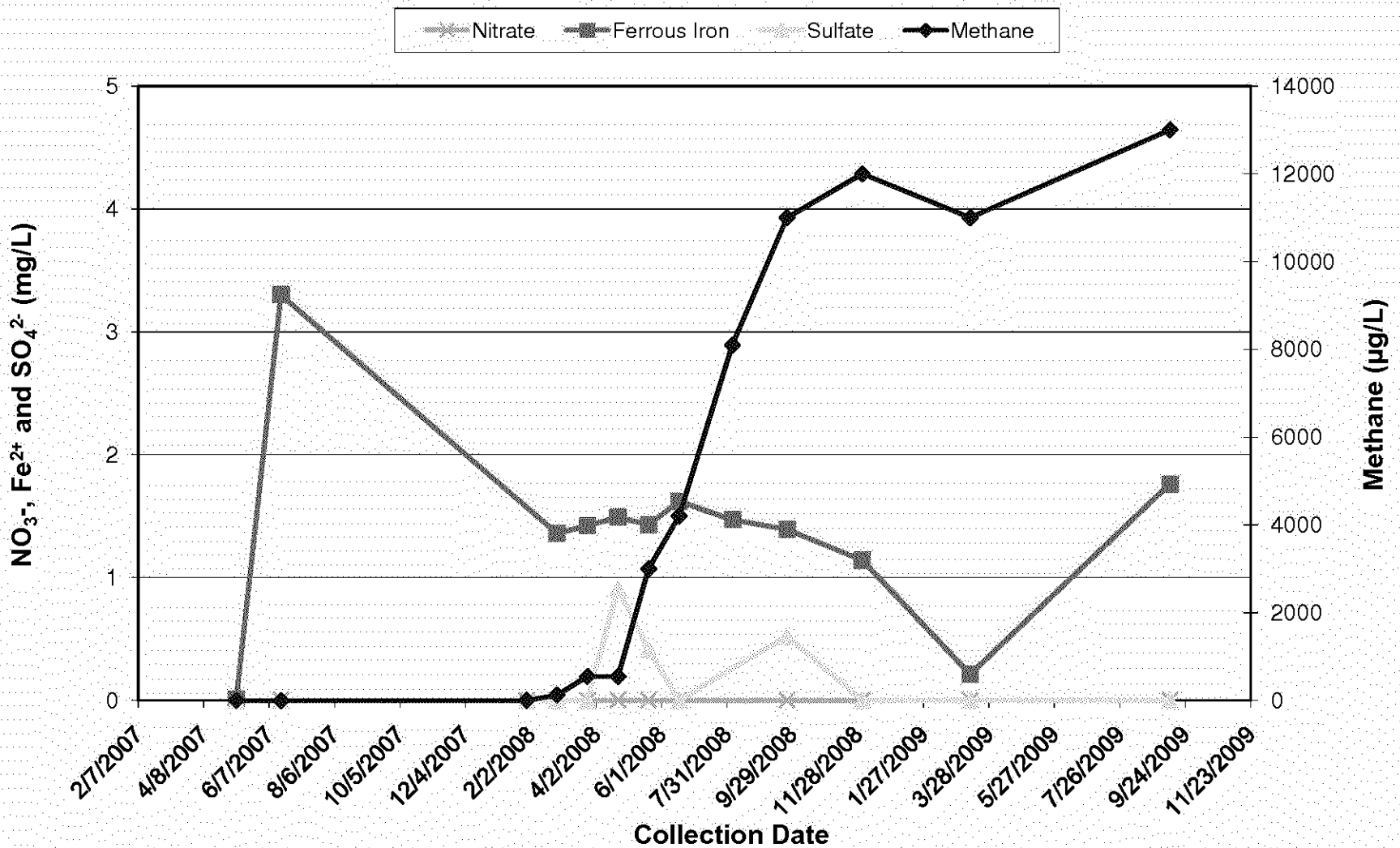
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - Electron Acceptors



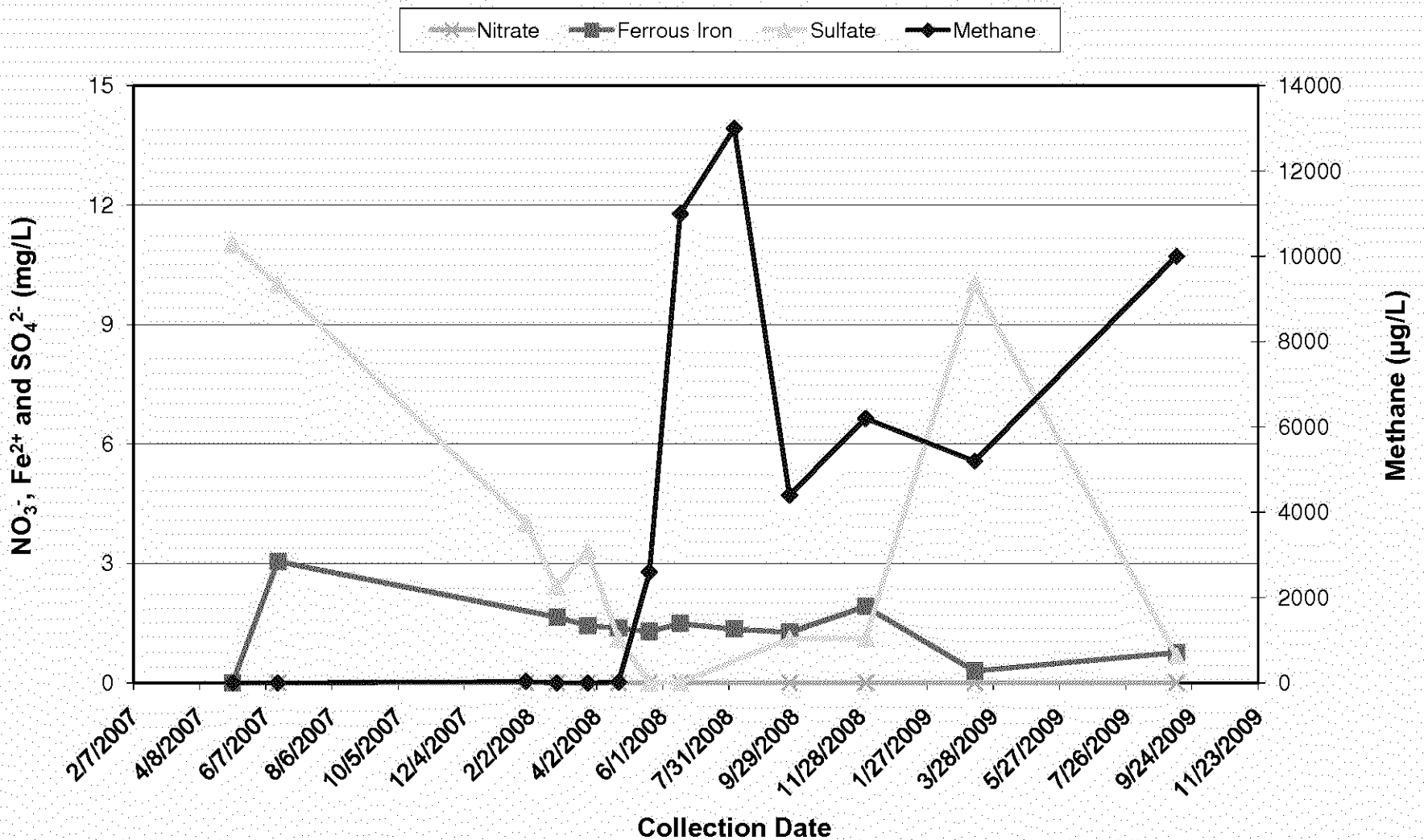
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - Electron Acceptors

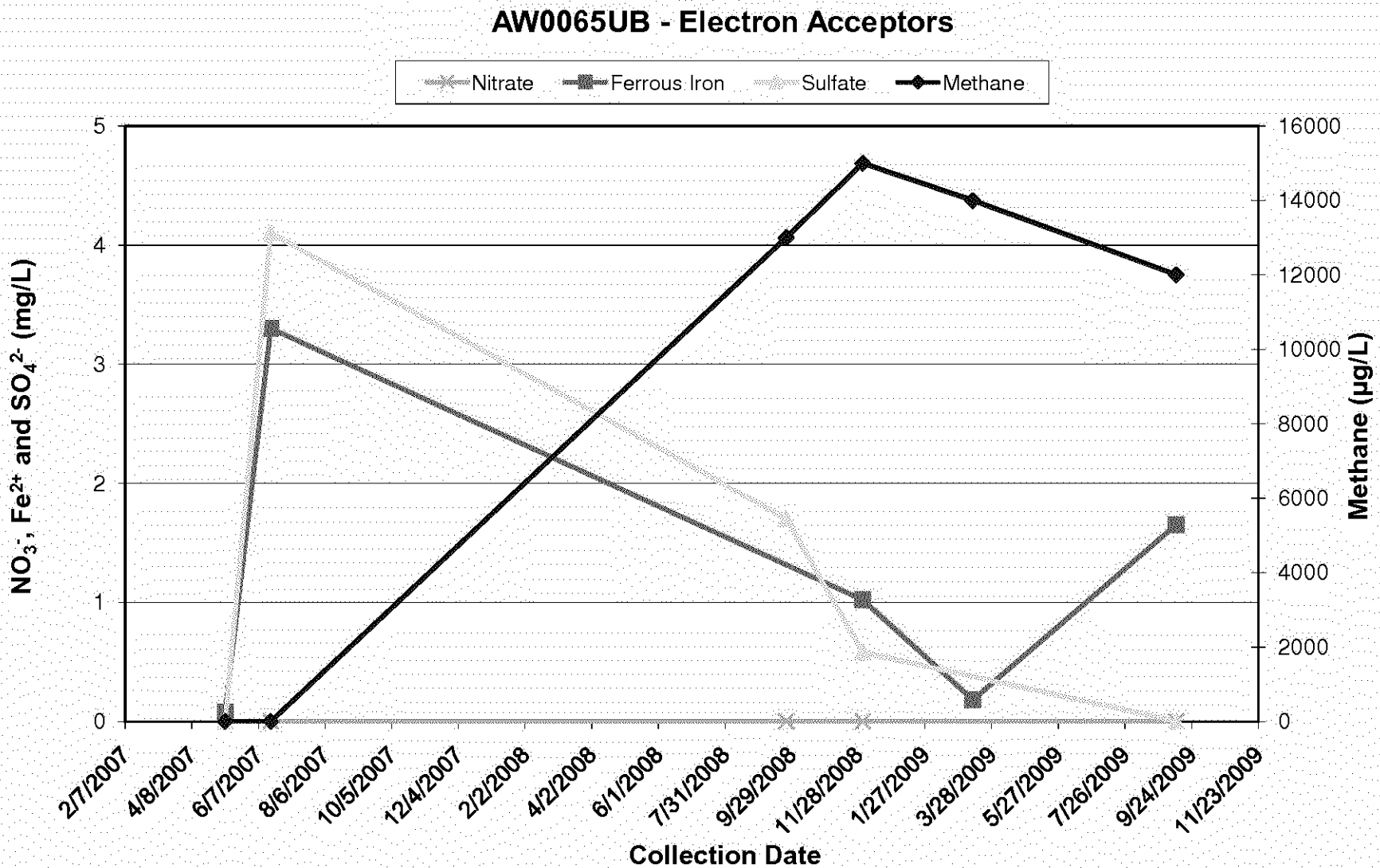


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

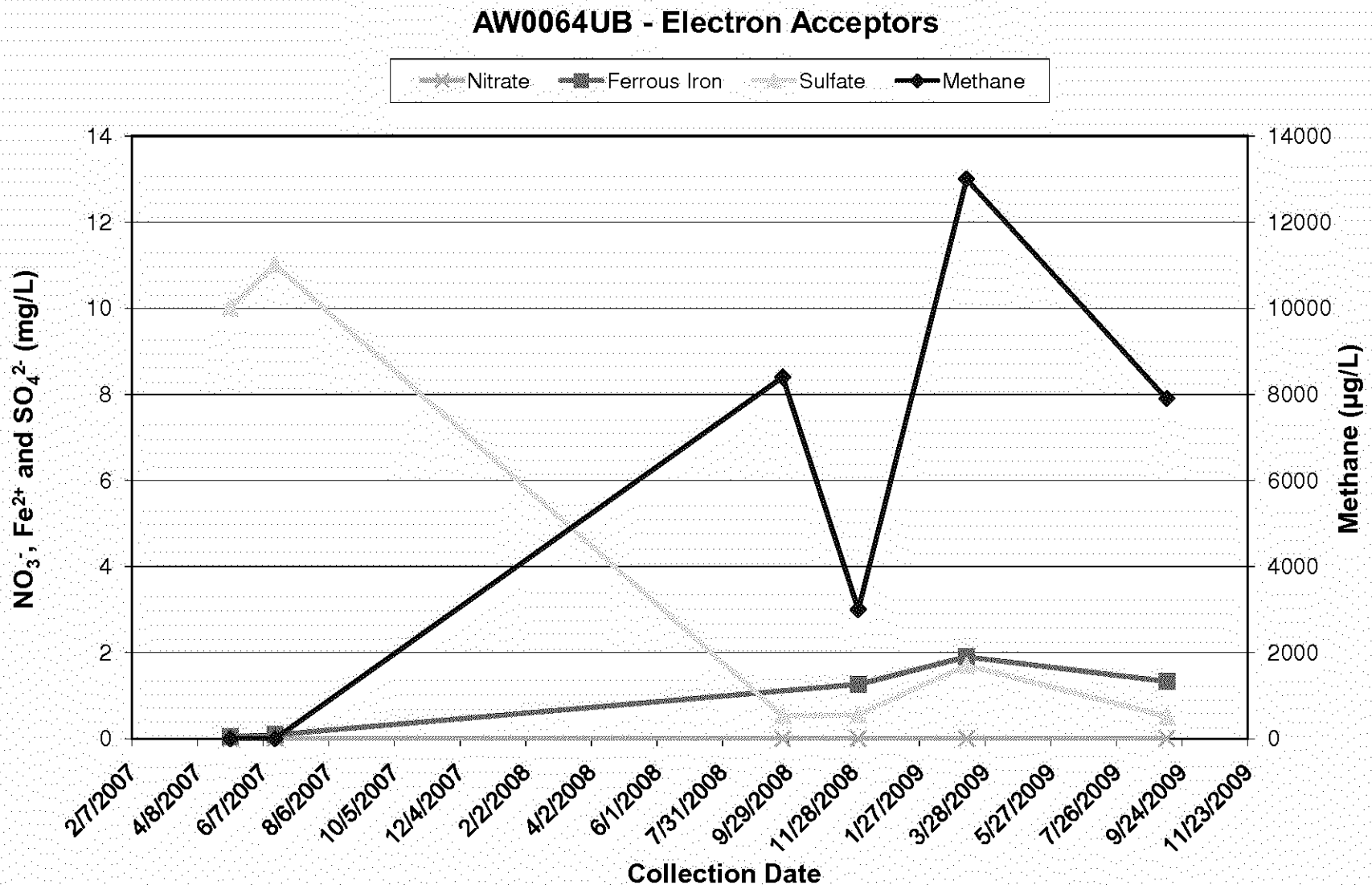
AW0075UB - Electron Acceptors



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

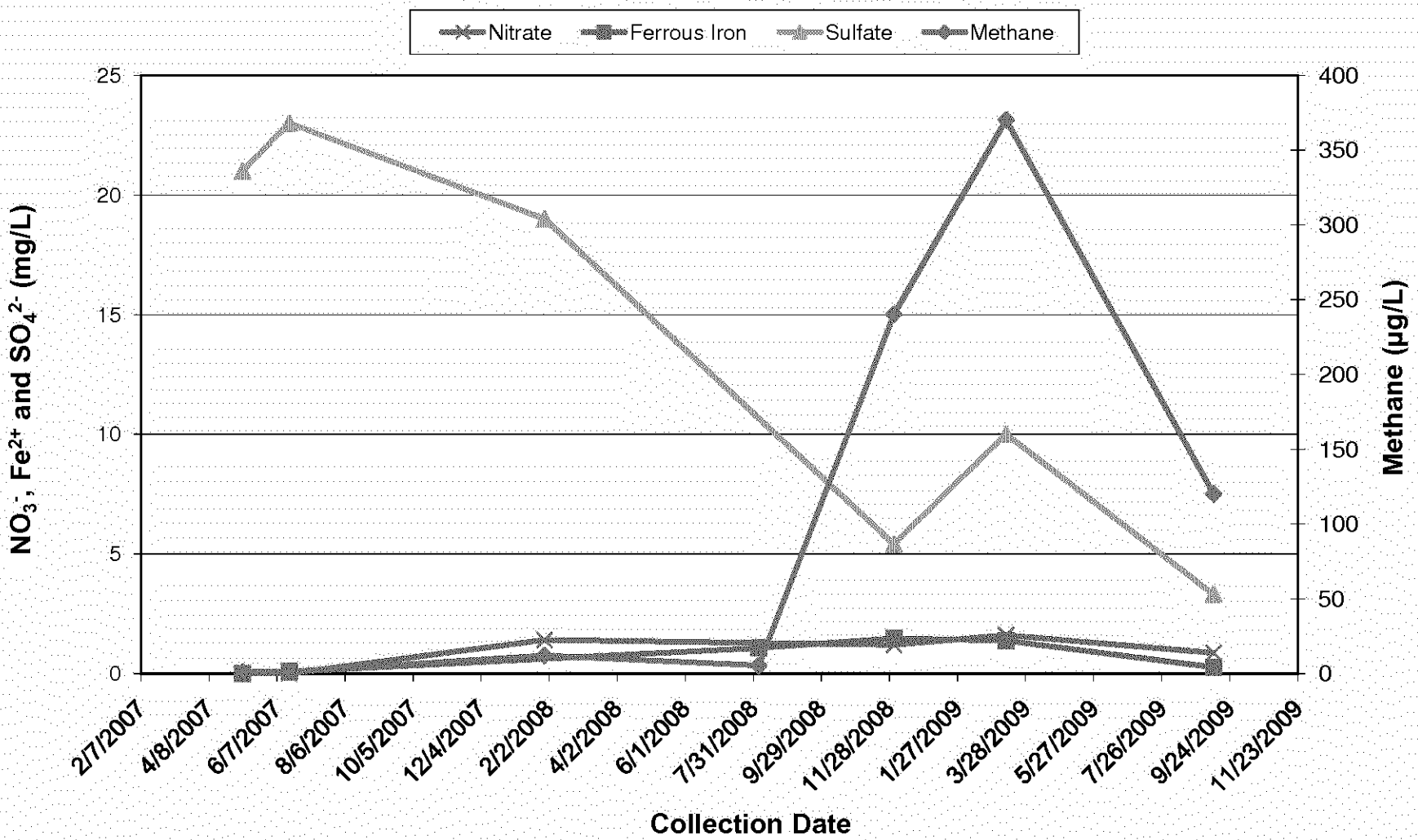


Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



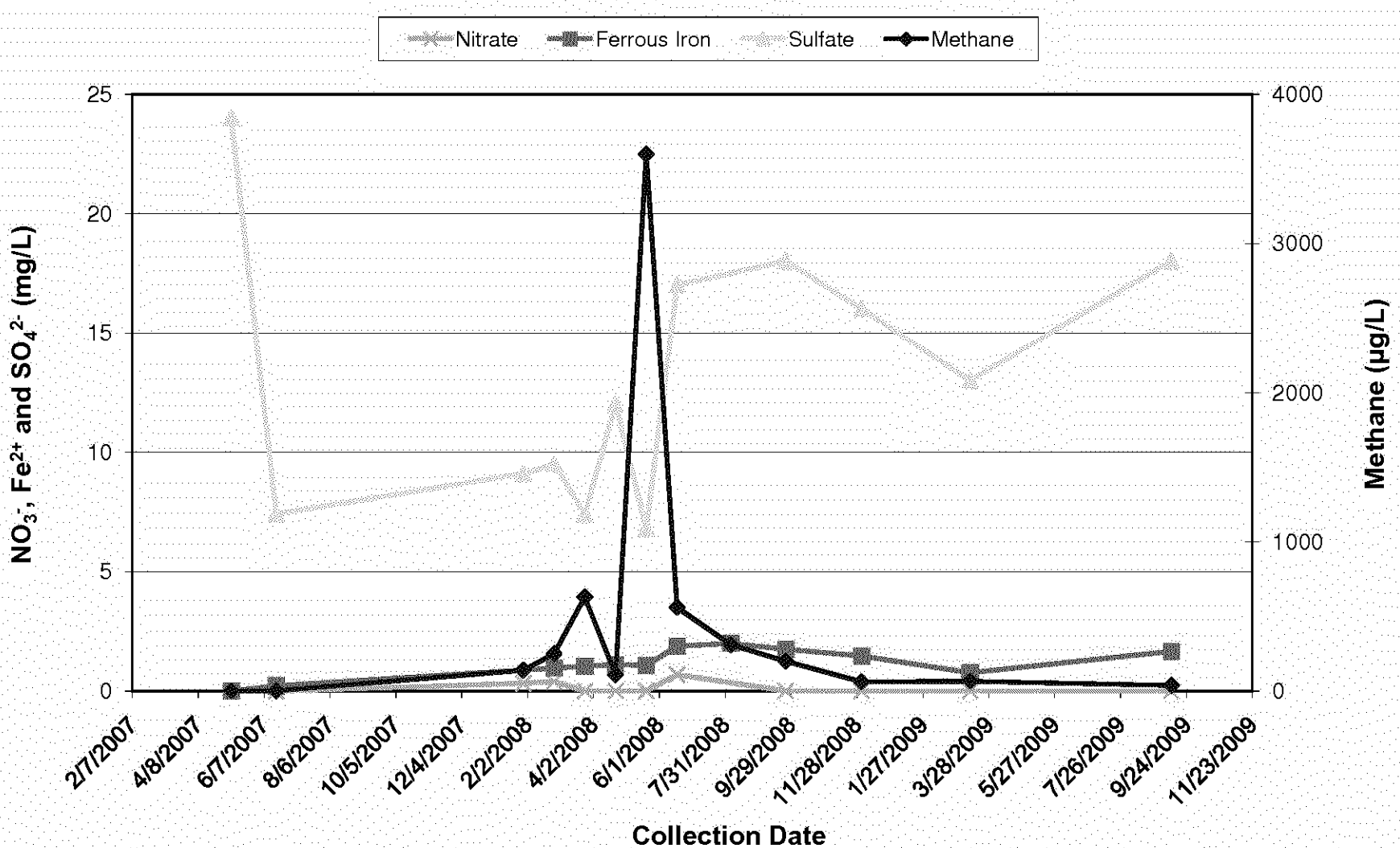
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - Electron Acceptors



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0073C - Electron Acceptors

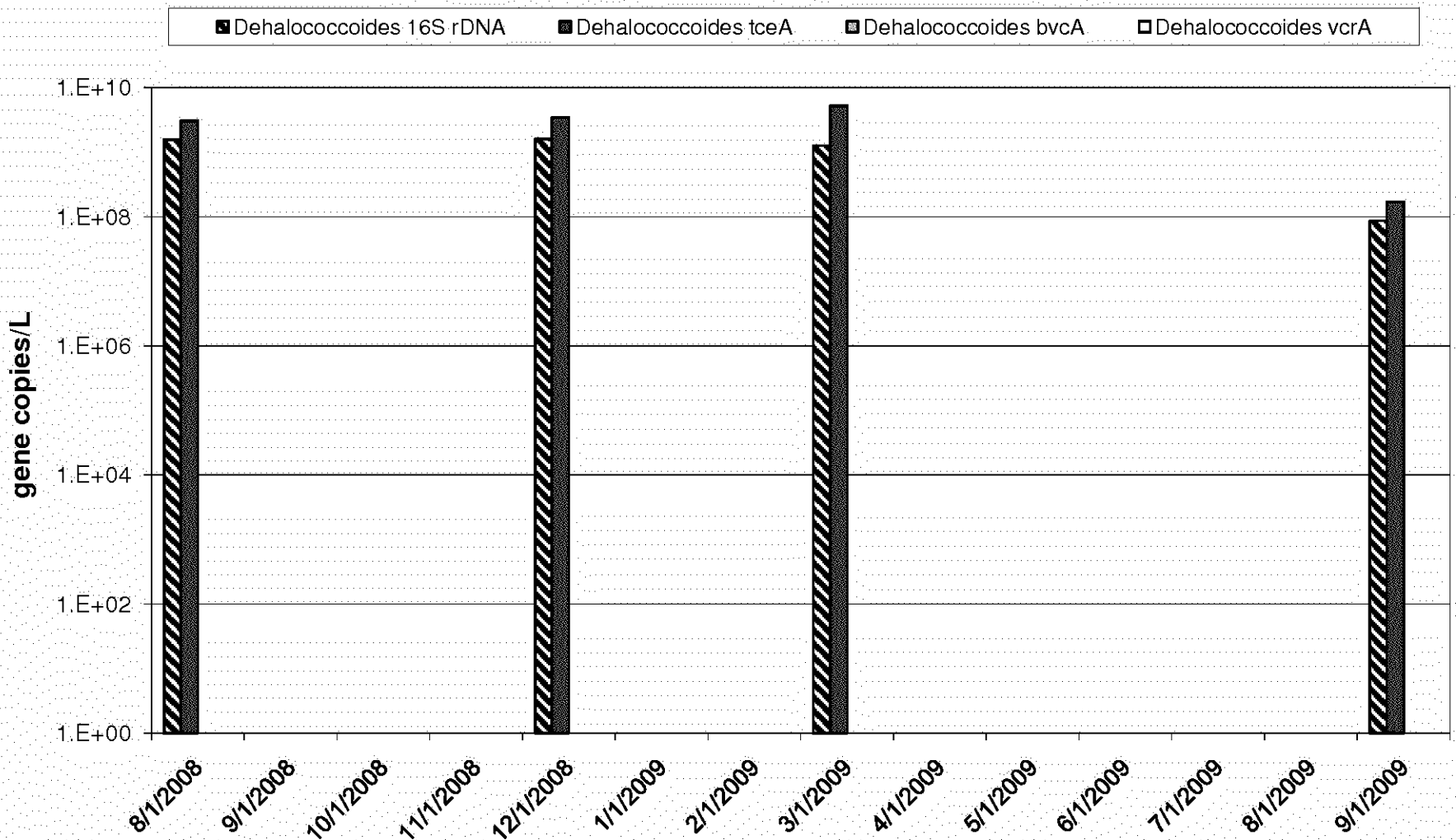


Dechlorinating Bacteria (qPCR data for DHC 16S rRNA gene and functional genes tceA, bvcA, and vcrA)

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

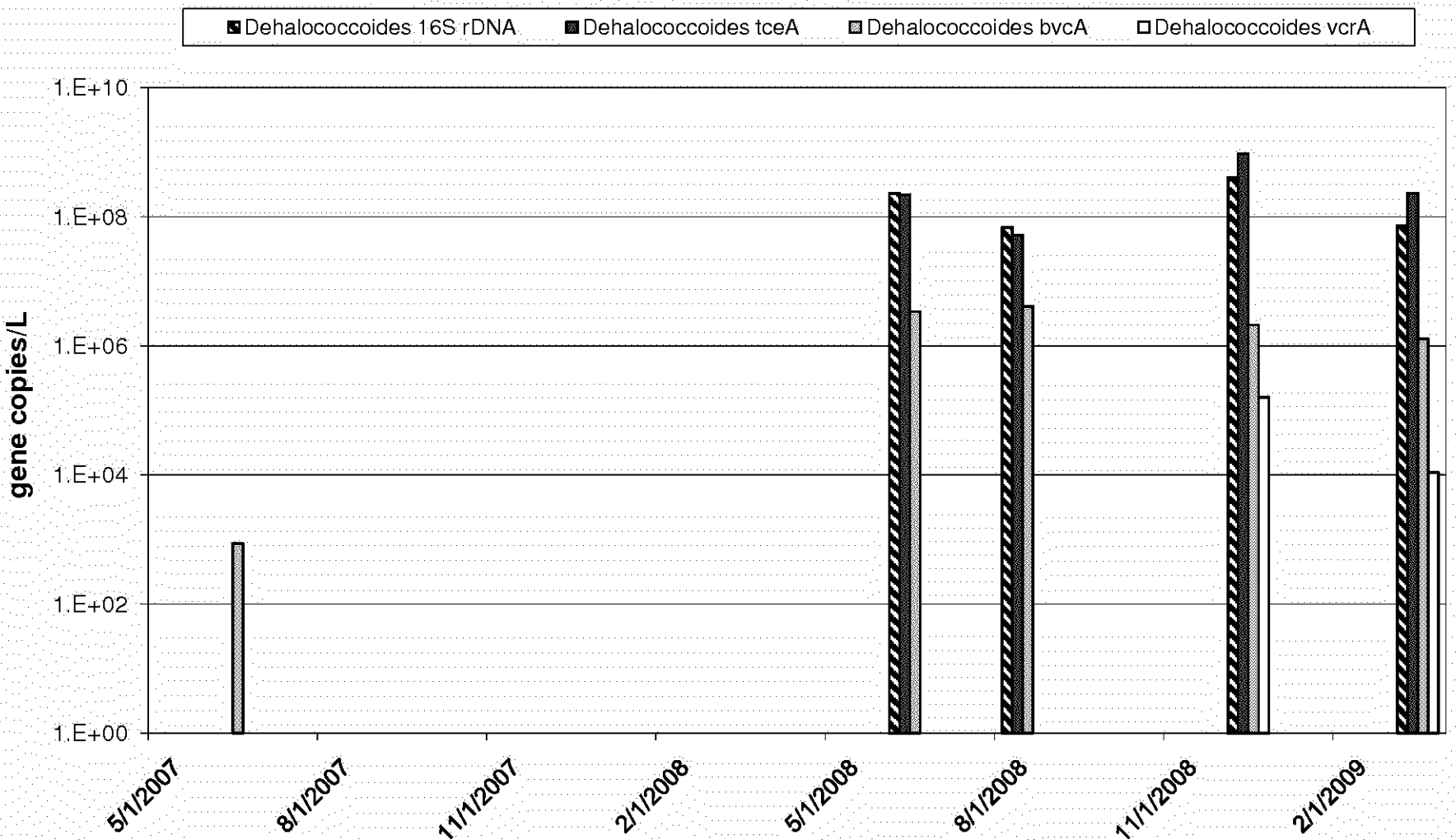
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

MWB006 - qPCR Results for Dehaloccoides



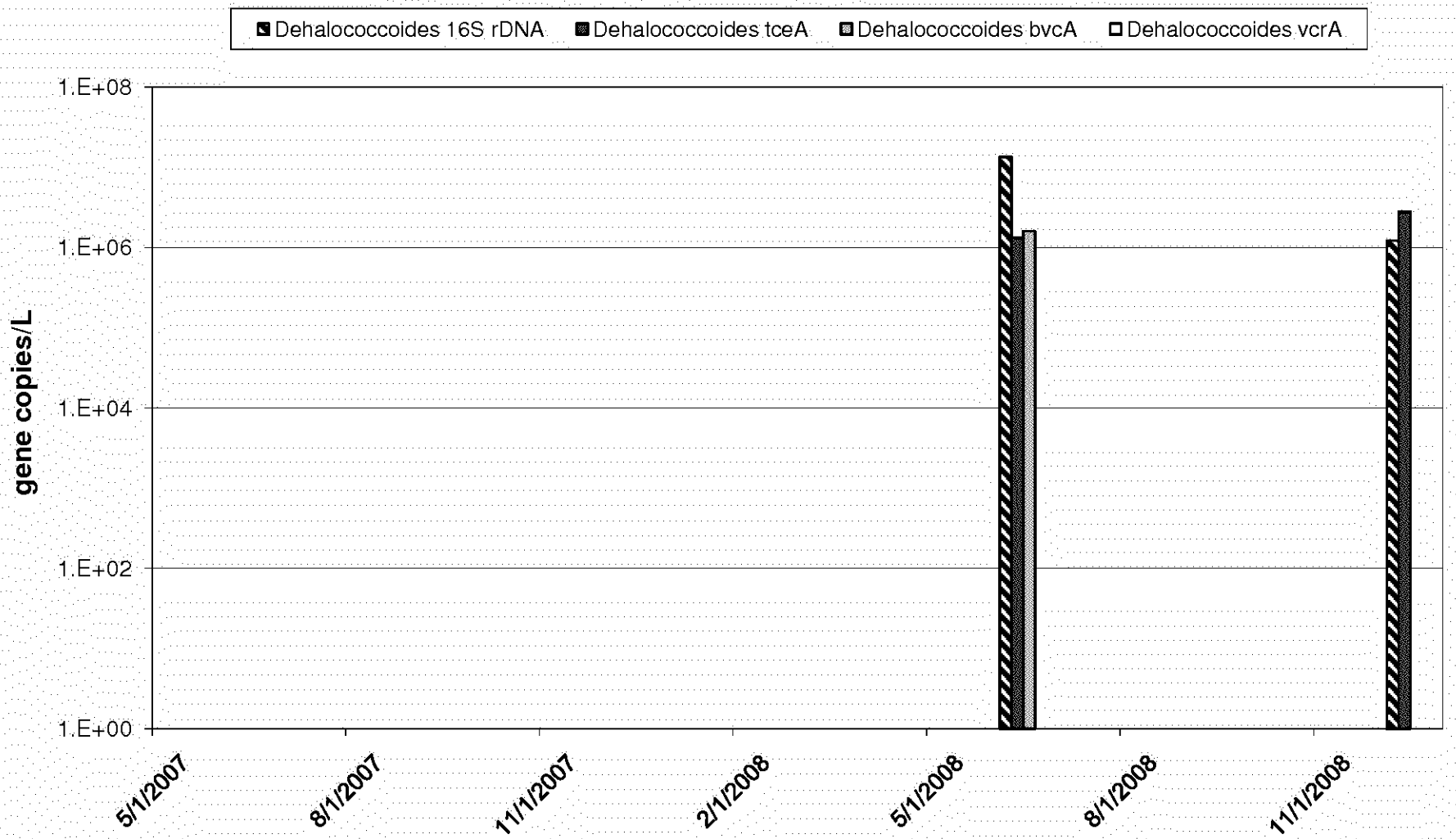
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0055UB - qPCR Results for Dehaloccoides



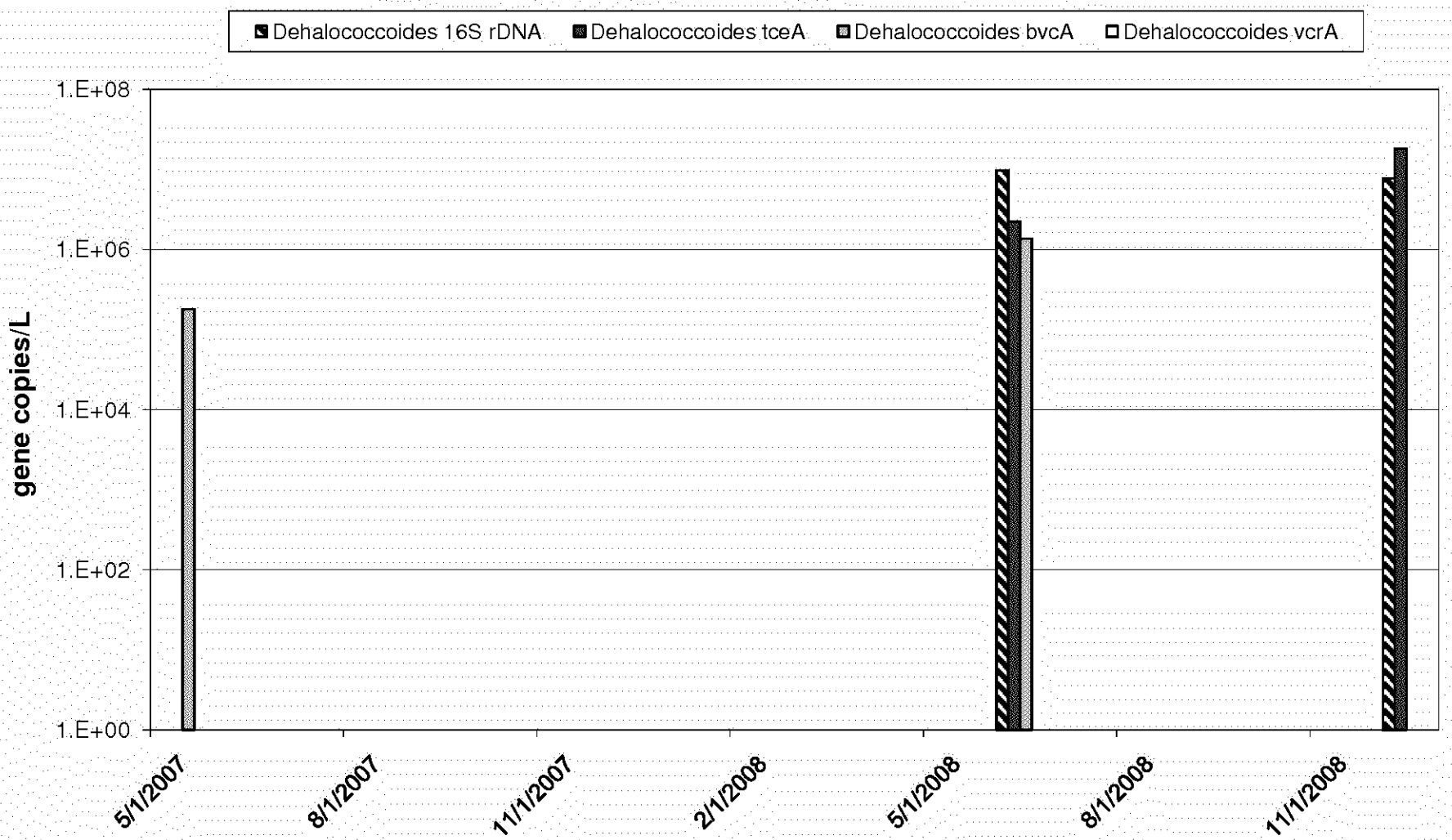
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB Q-PCR Results for Dehaloccoides



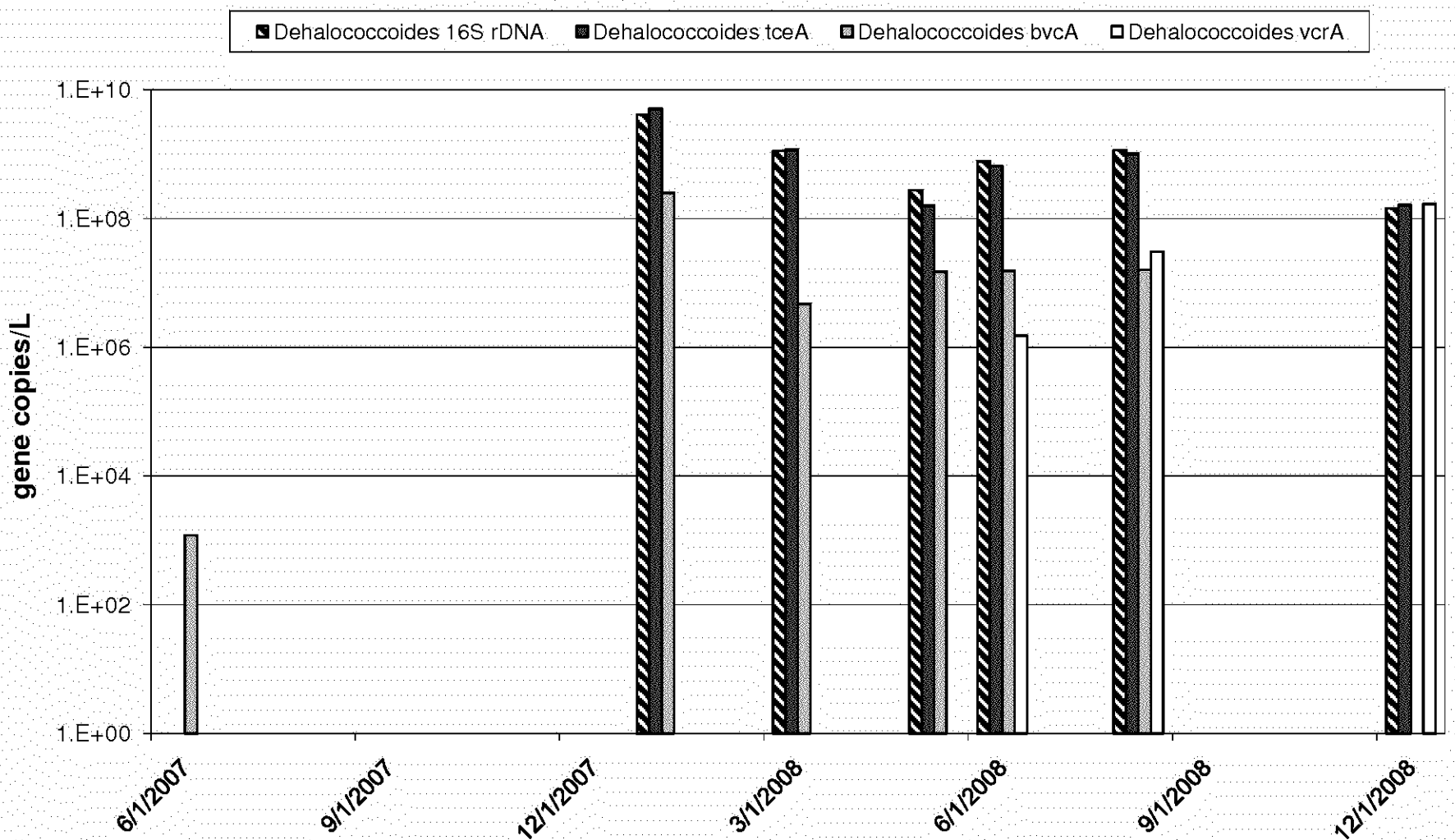
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0066UB - qPCR Results for Dehaloccoides



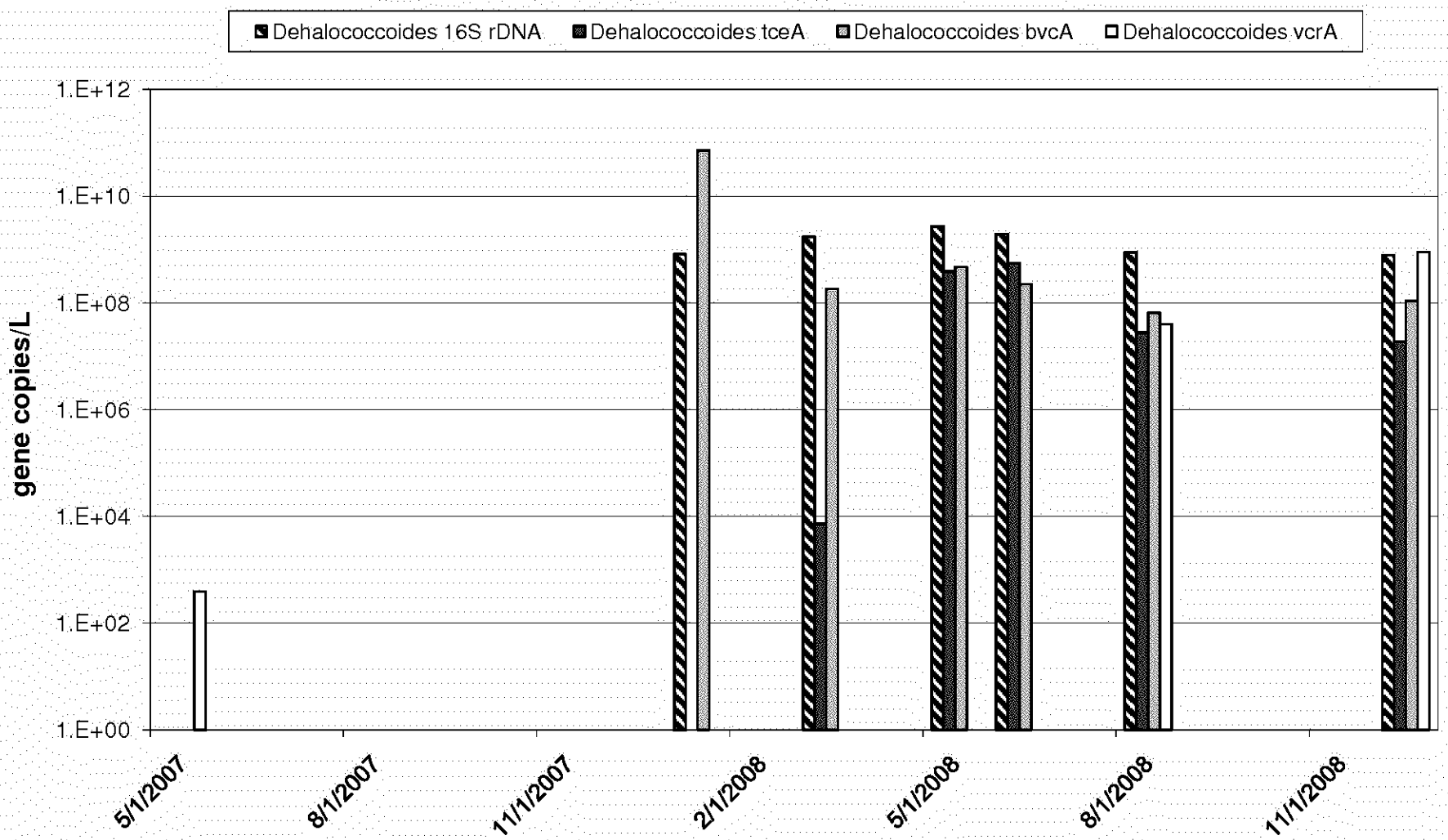
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - qPCR Results for Dehaloccoides



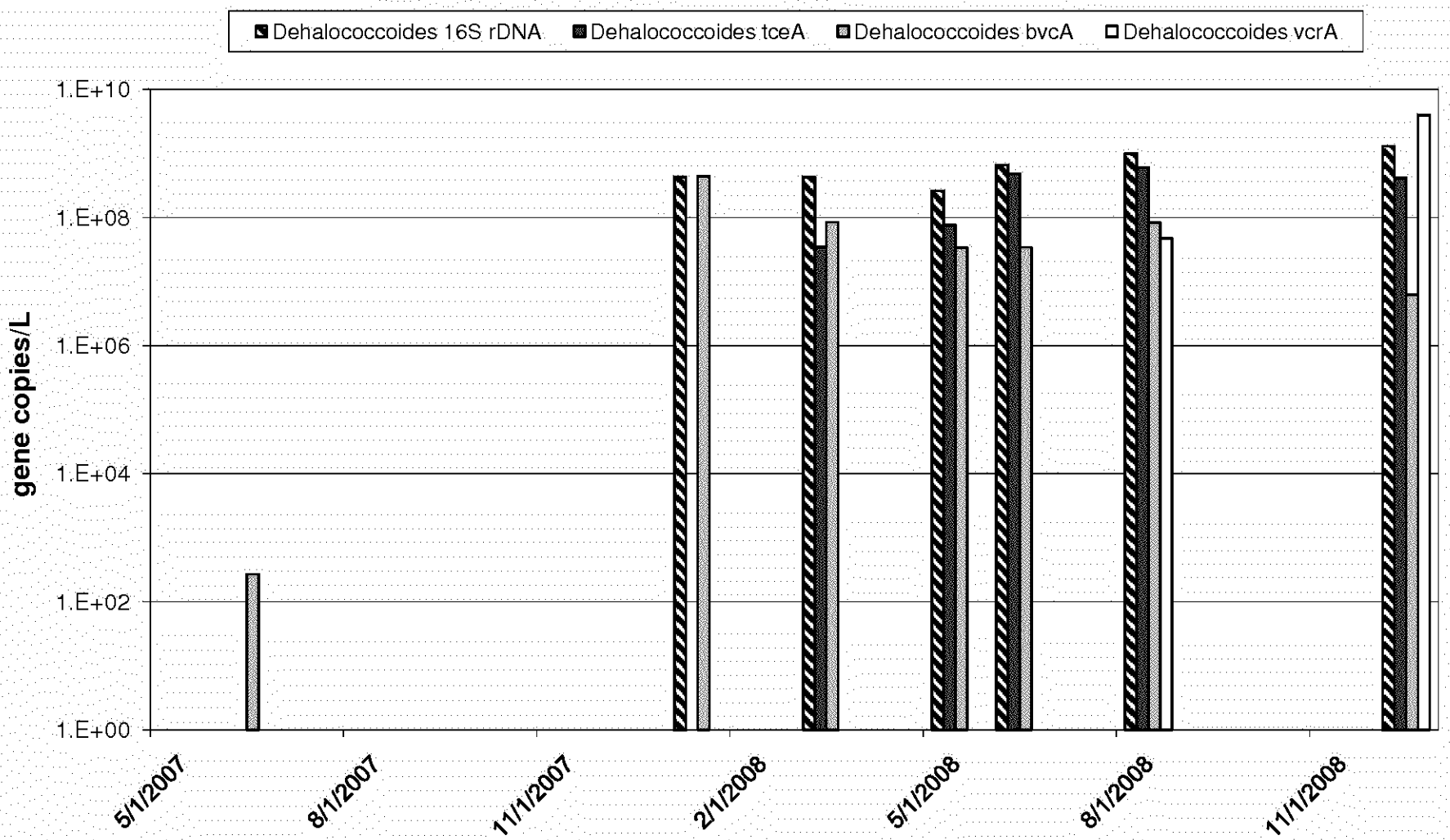
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - qPCR Results for Dehaloccoides



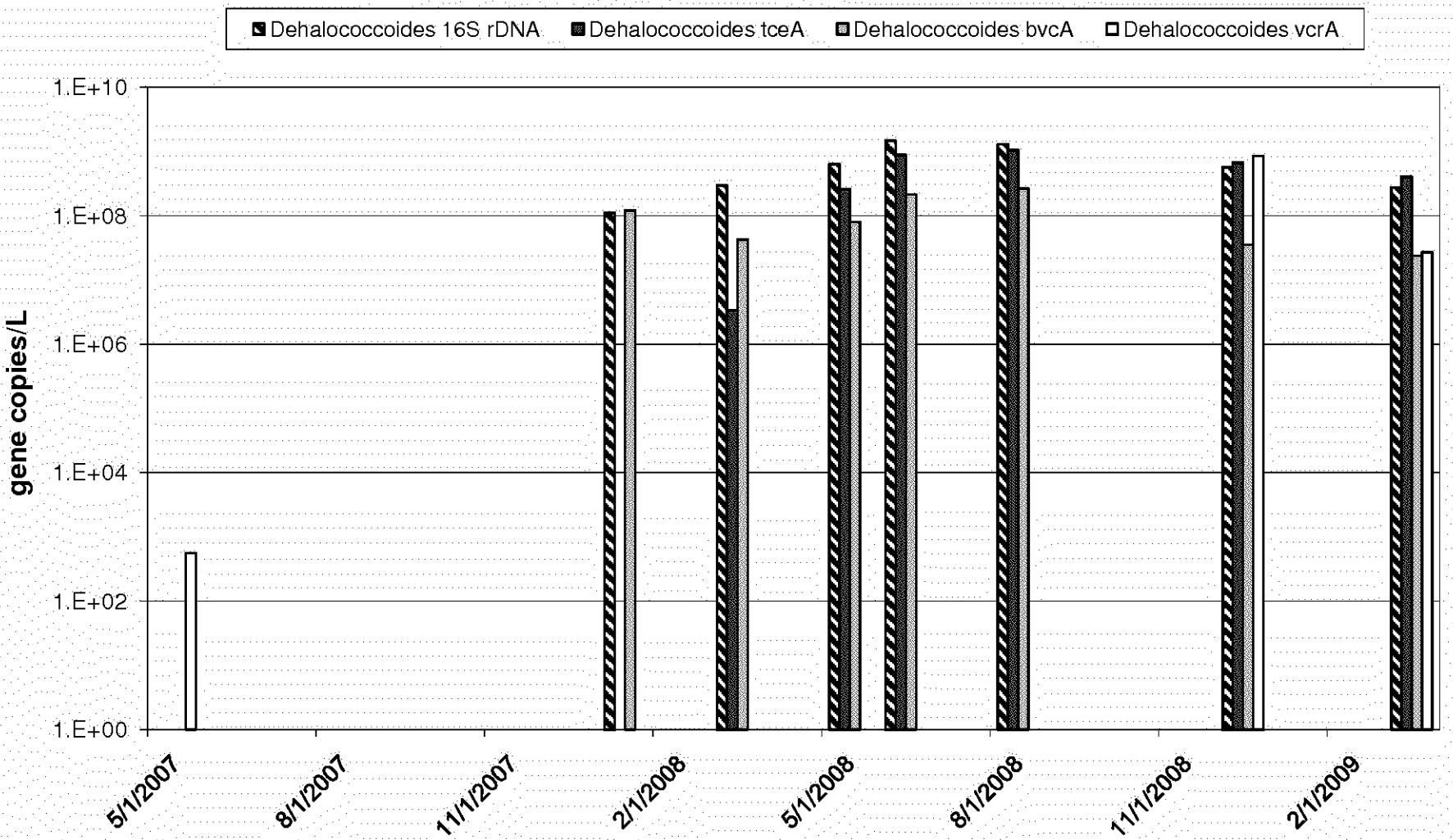
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - qPCR Results for Dehaloccoides



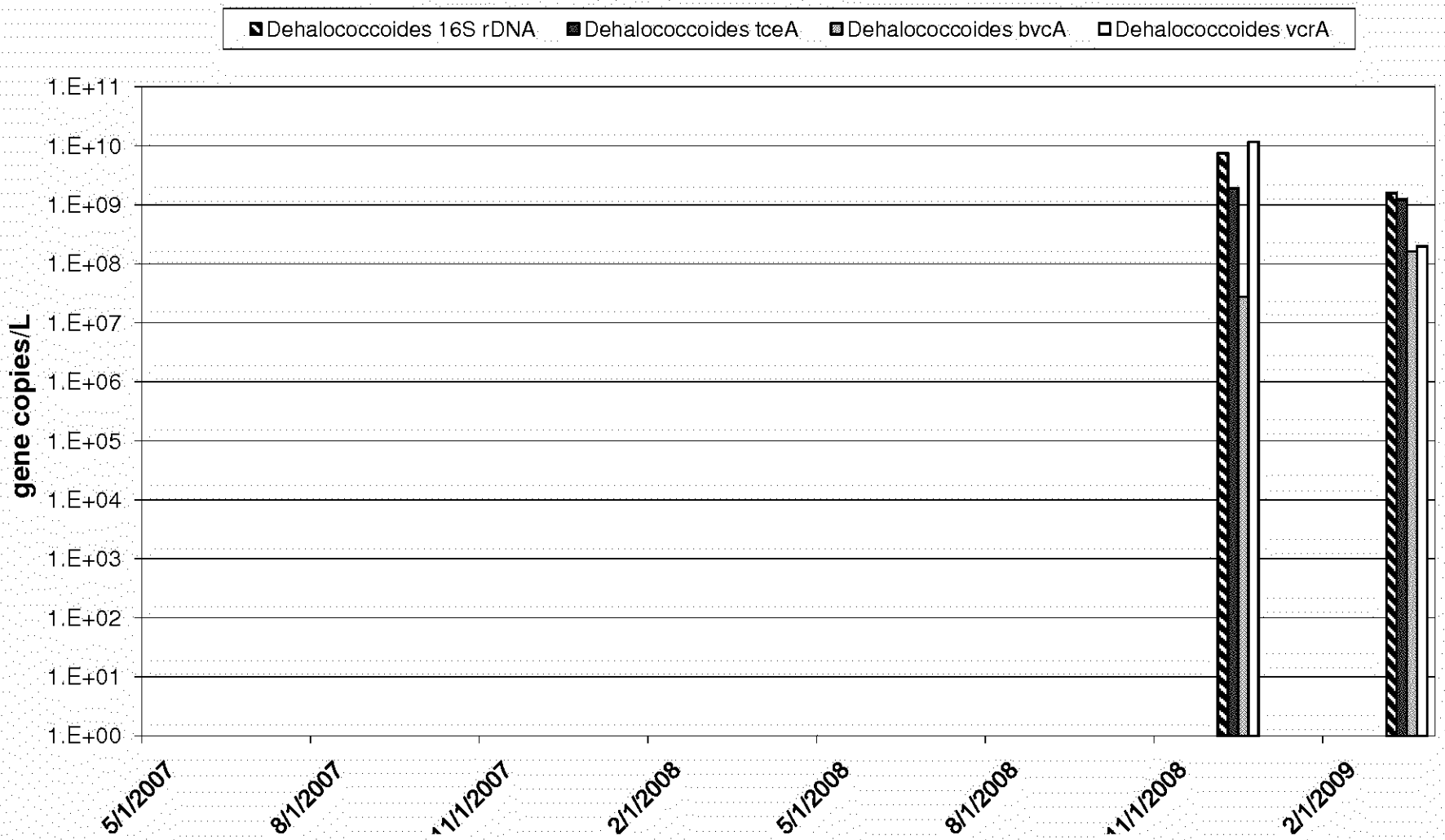
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0075UB - qPCR Results for Dehaloccoides



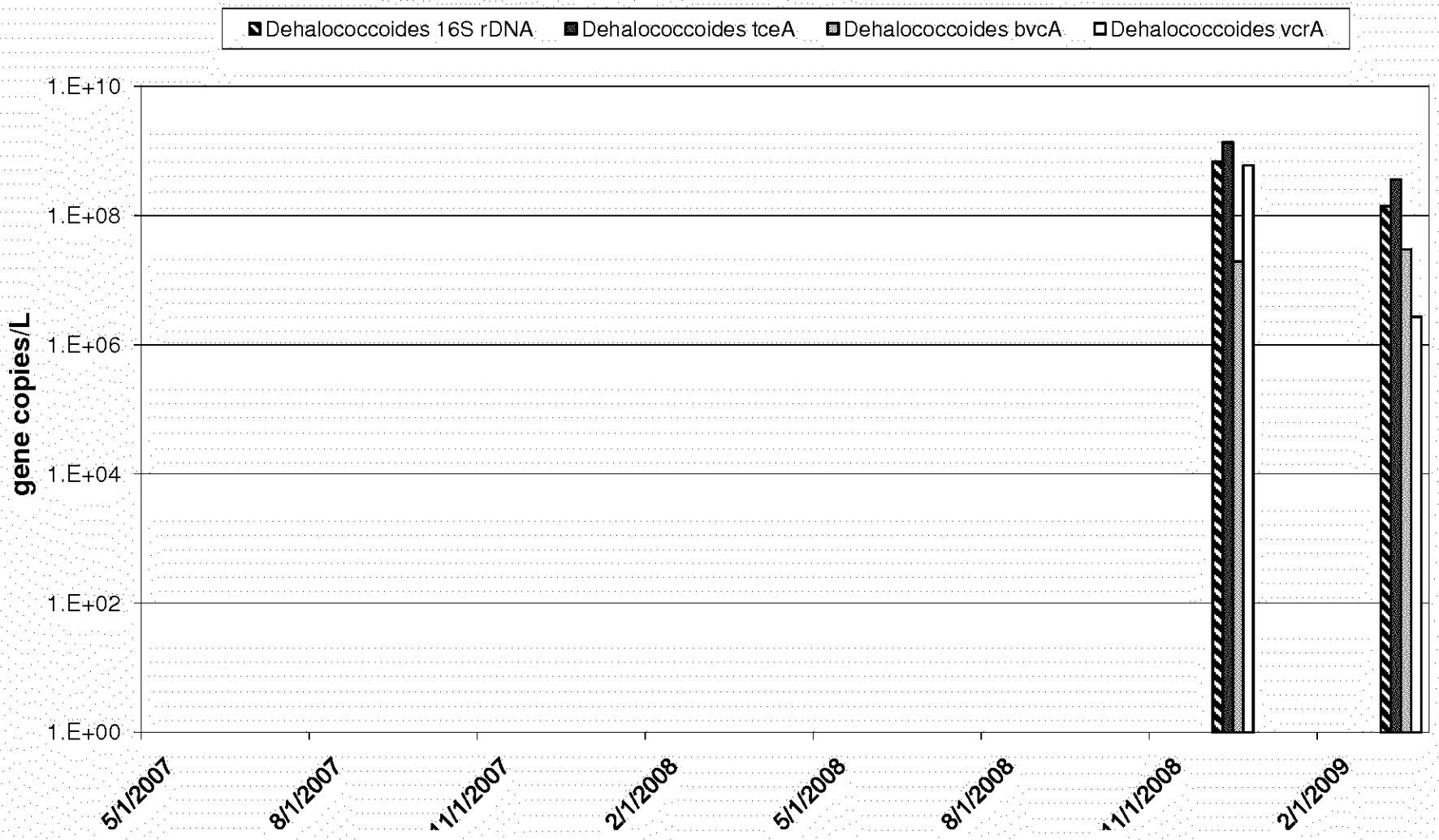
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0065UB - qPCR Results for Dehaloccoides



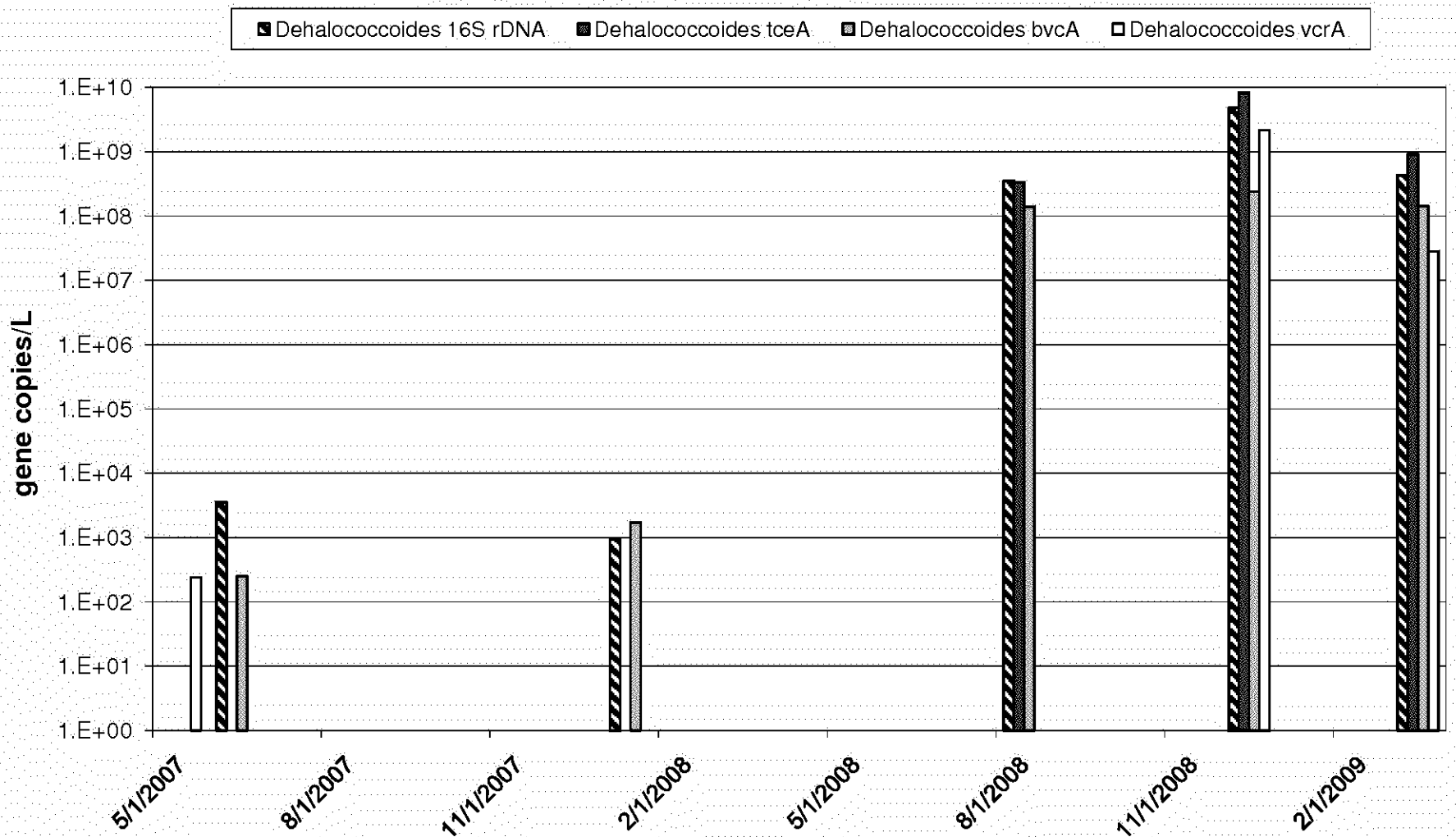
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0064UB Q-PCR Results for Dehaloccoides



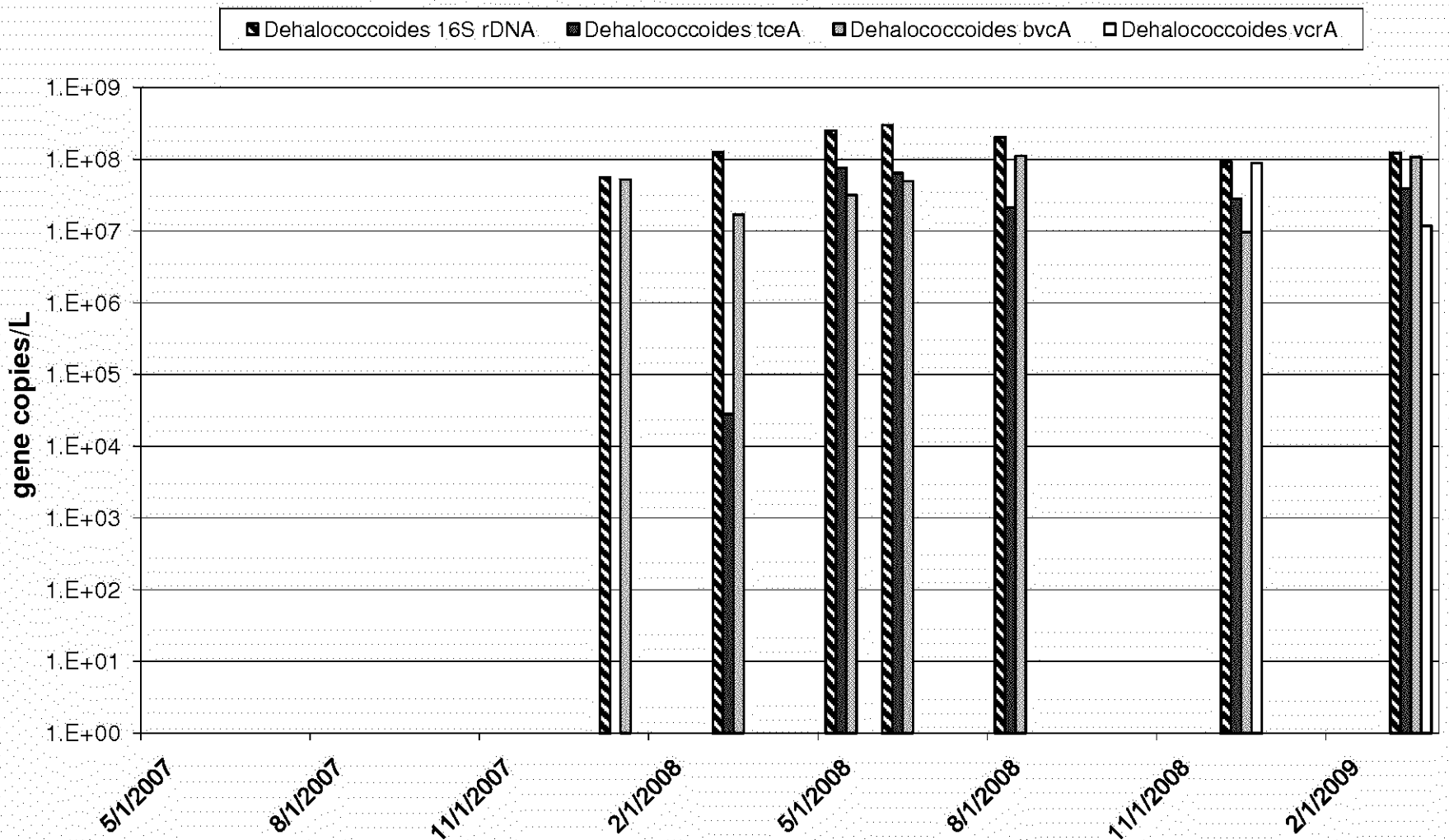
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - qPCR Results for Dehaloccoides



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0073C - qPCR Results for Dehaloccoides

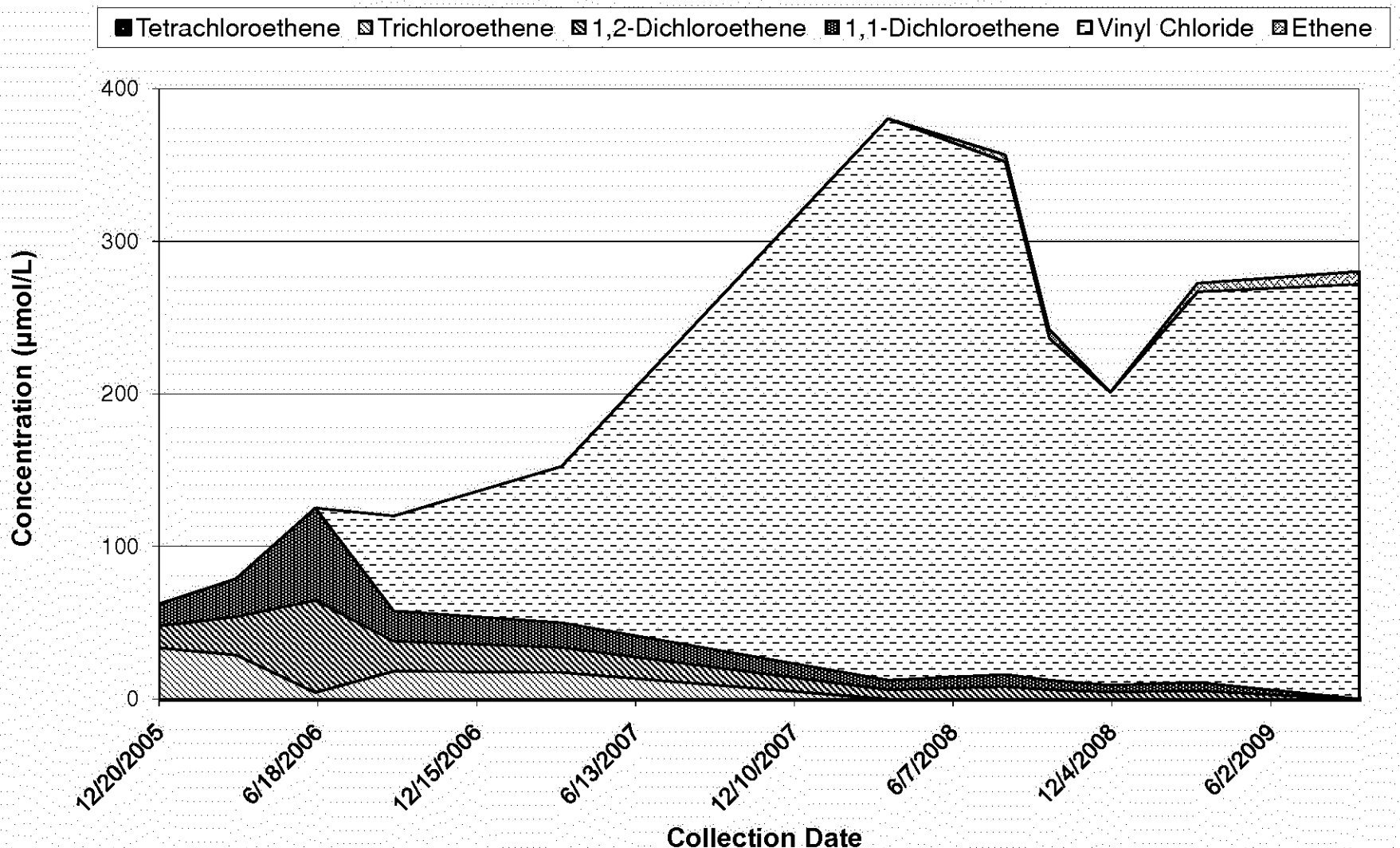


Molar Concentrations of CVOCs (PCE, TCE, 1,1-DCE, 1,2-DCE, & VC) and Ethene

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

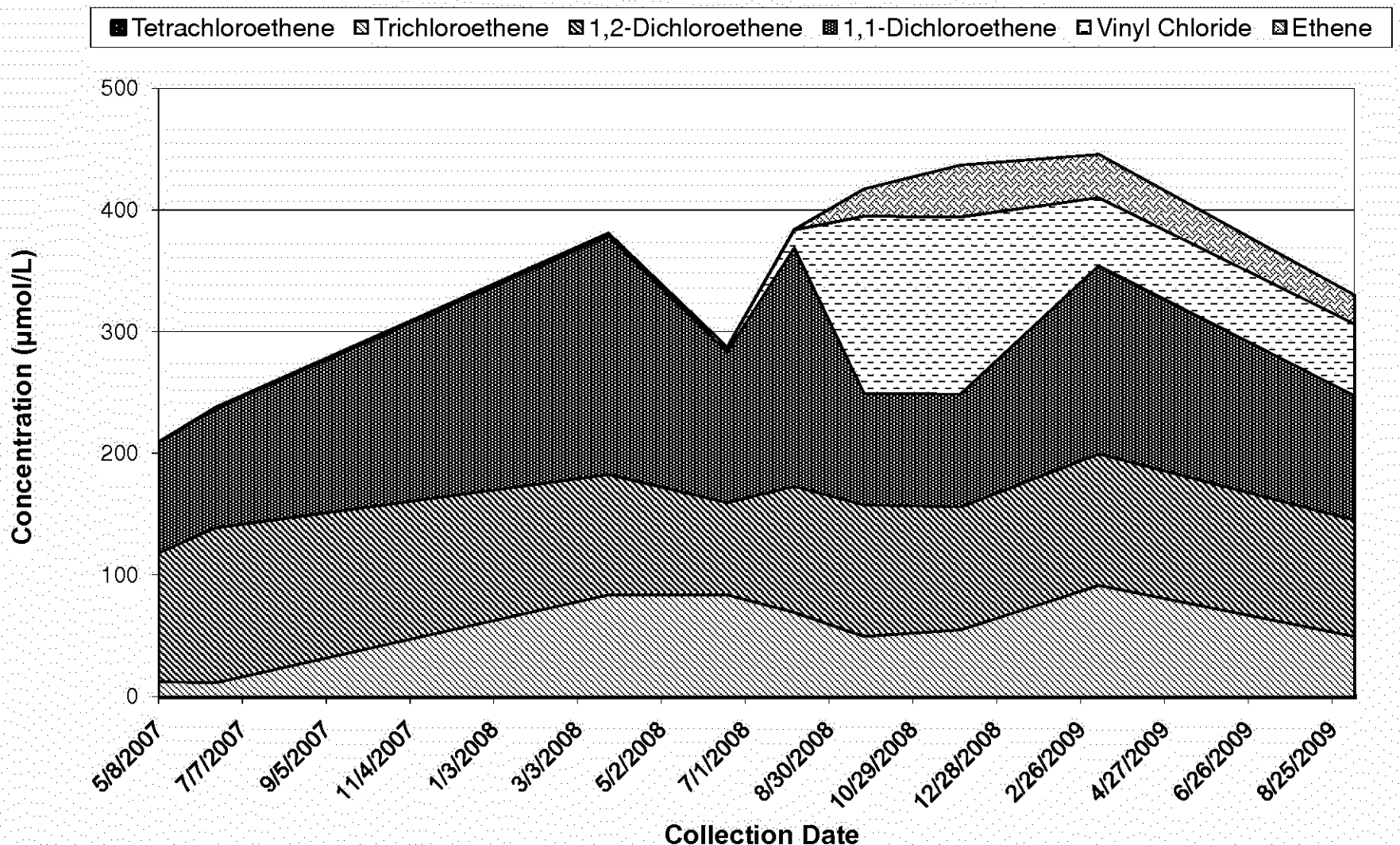
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

MWB006 - VOC Molar Concentrations



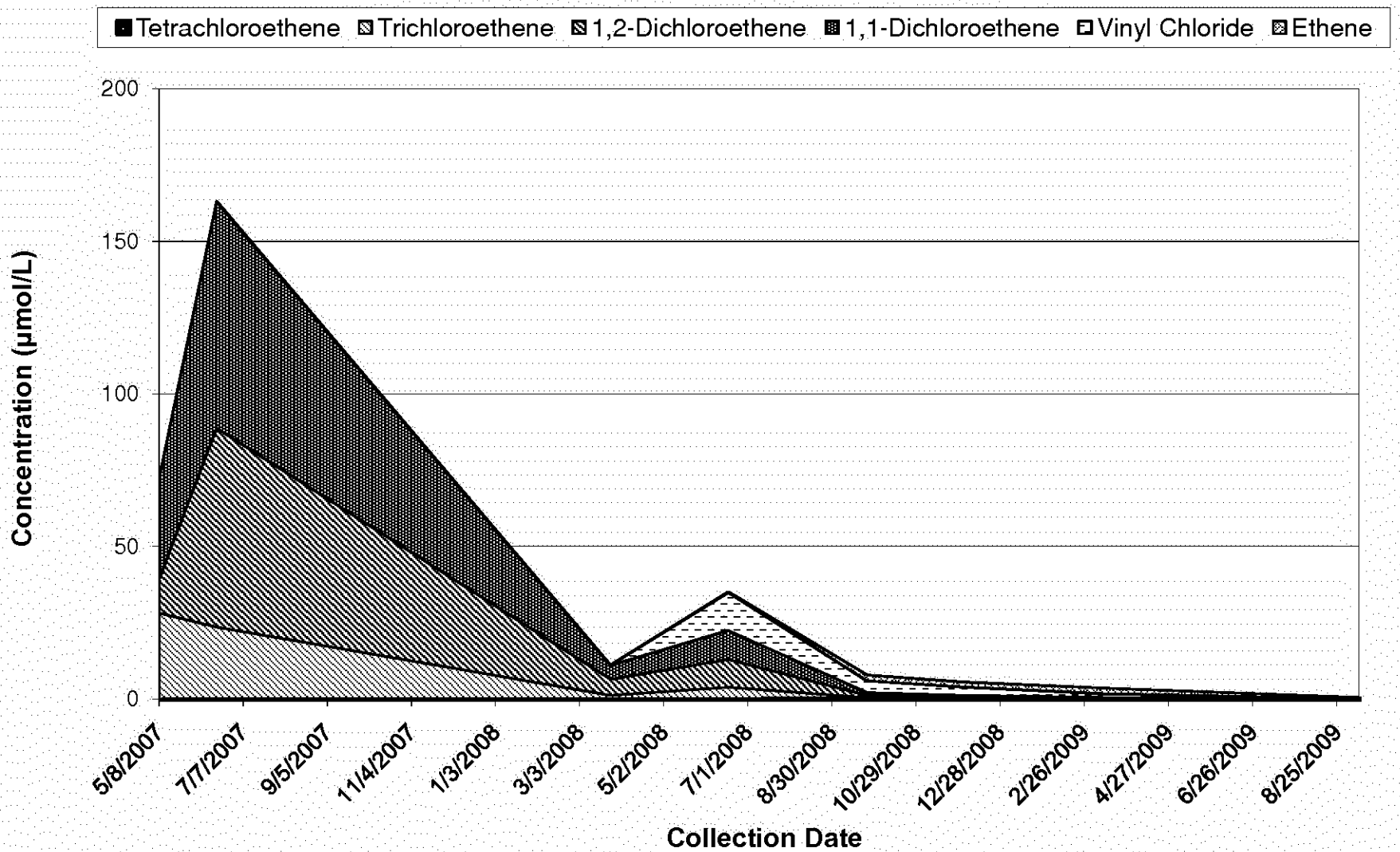
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0055UB - VOC Molar Concentrations



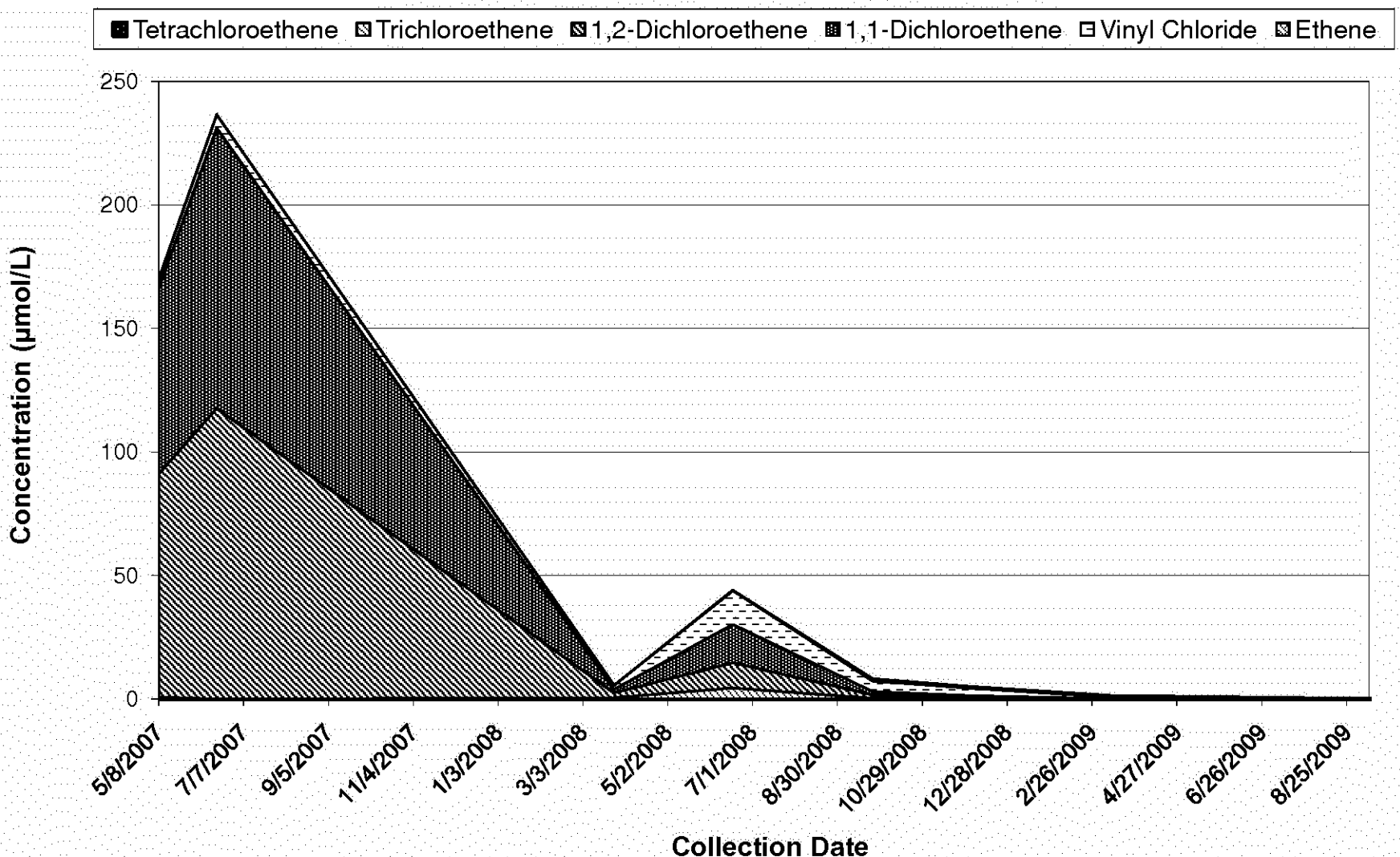
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB - VOC Molar Concentrations



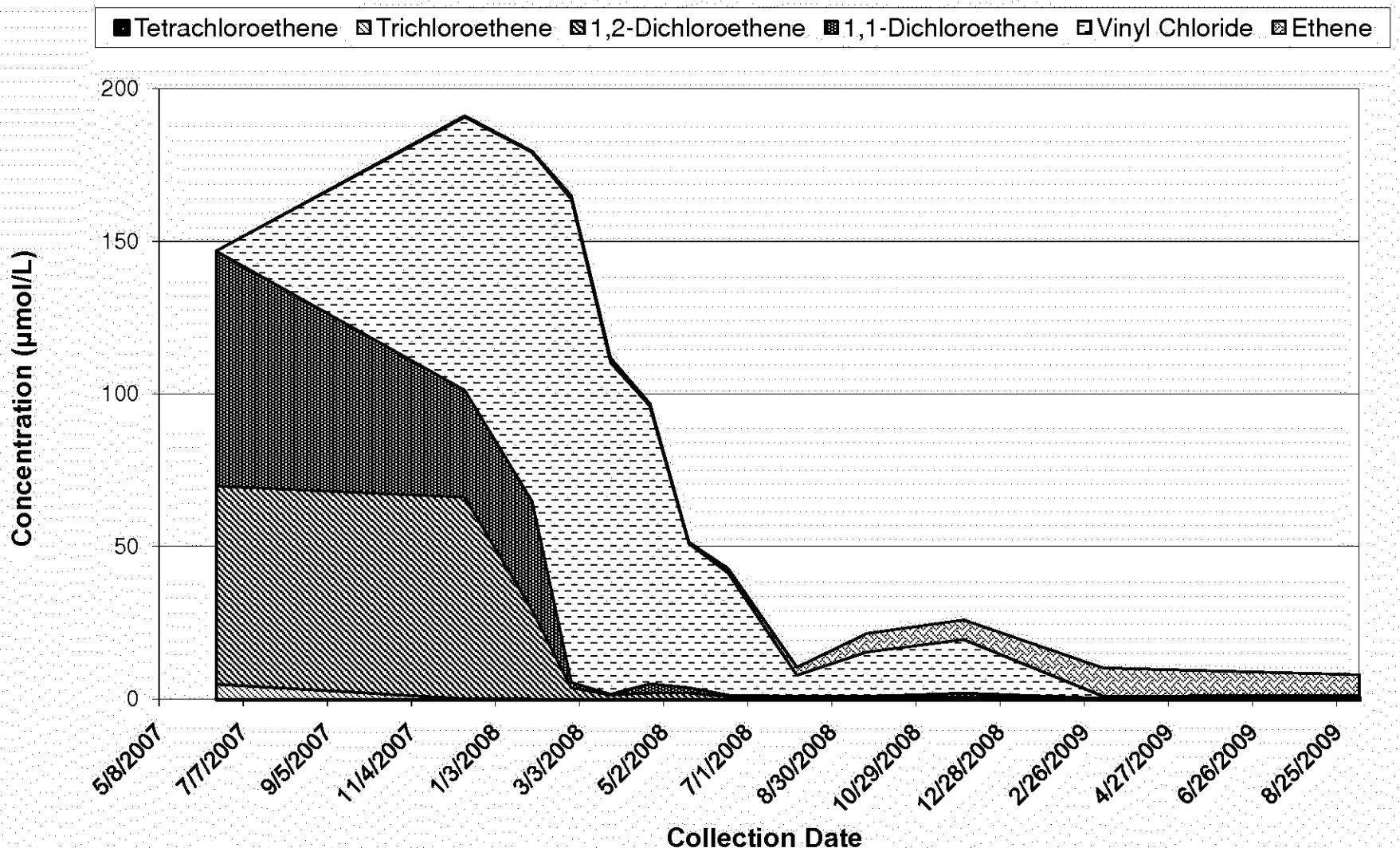
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0066UB - VOC Molar Concentrations



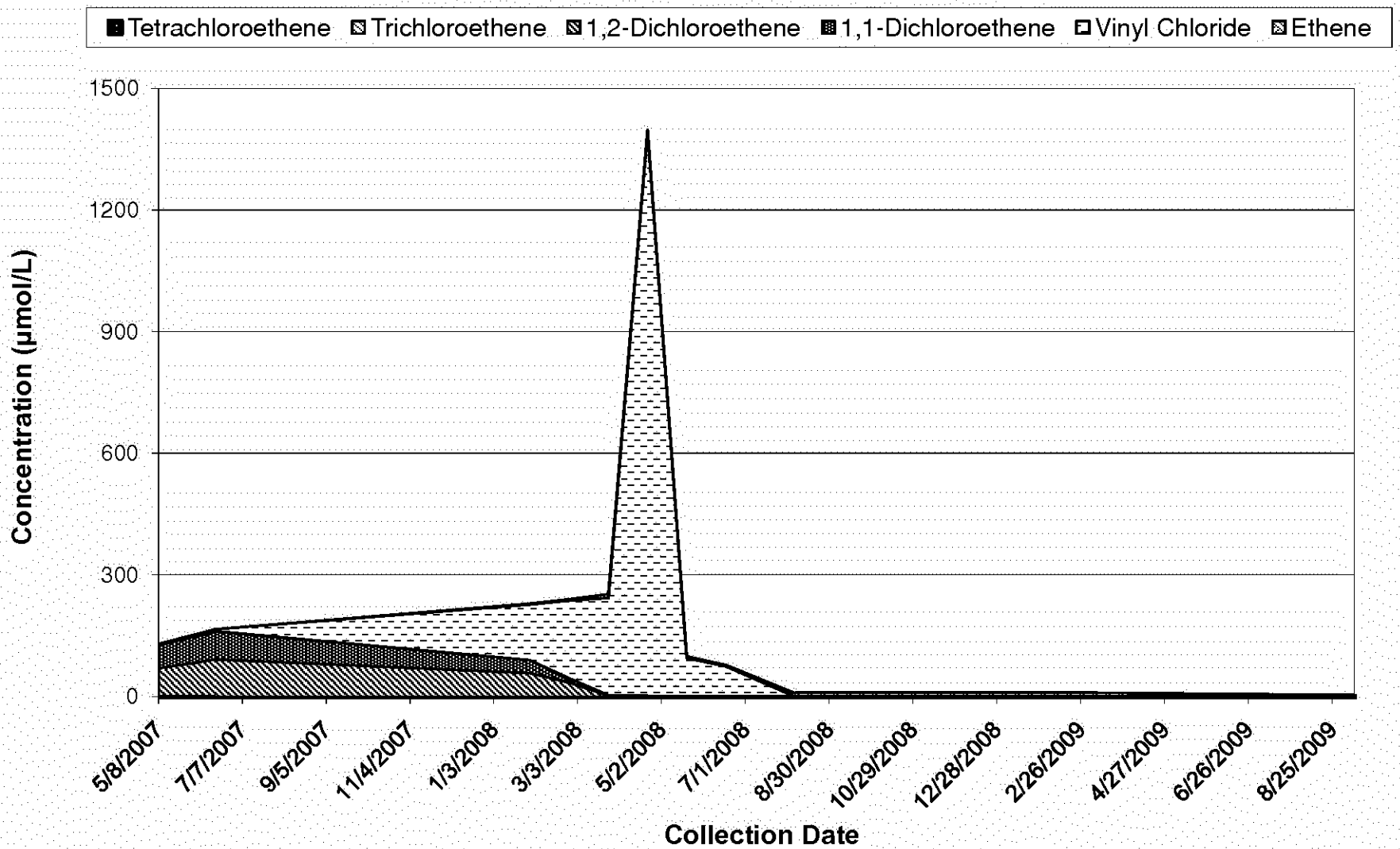
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - VOC Molar Concentrations



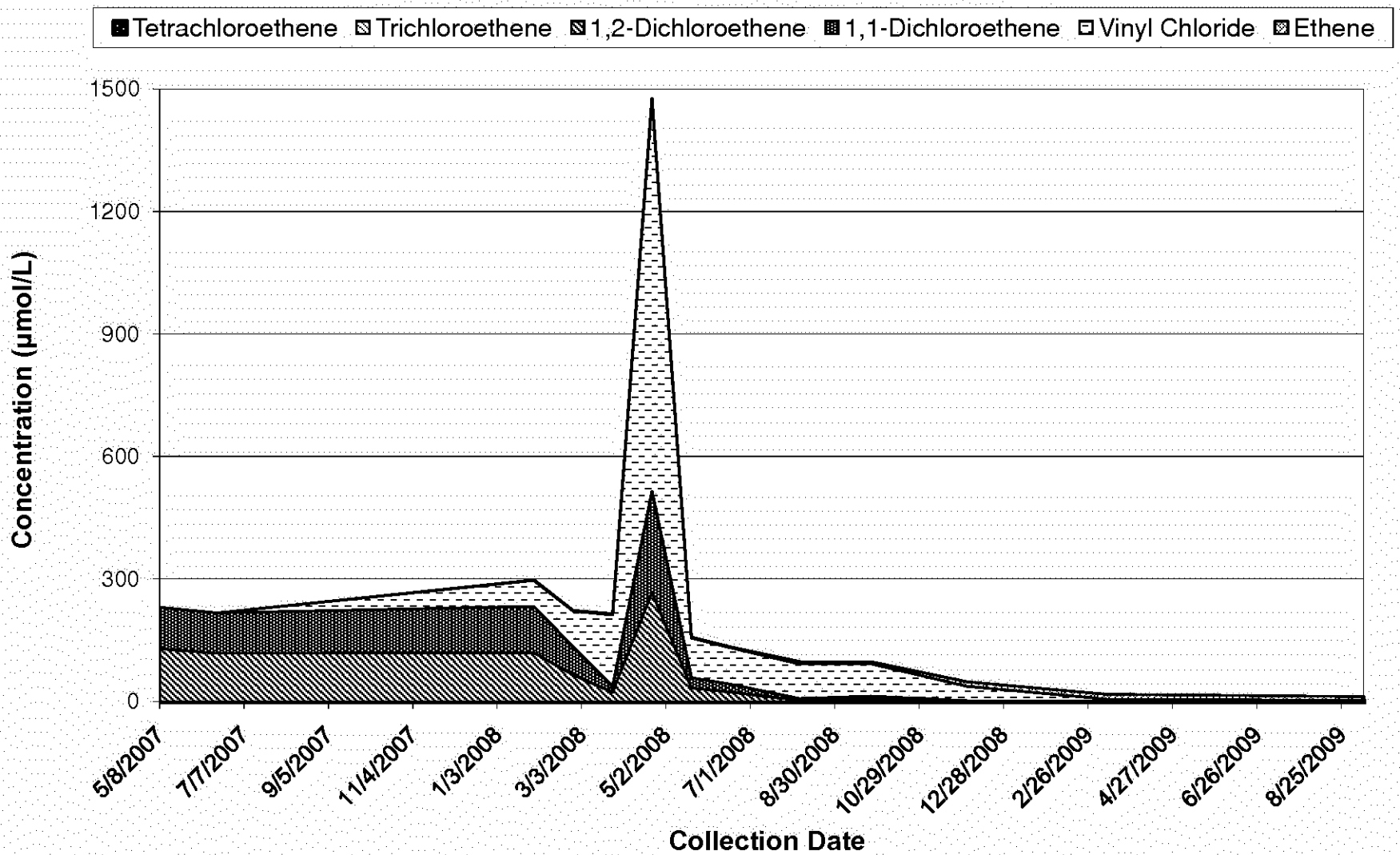
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - VOC Molar Concentrations



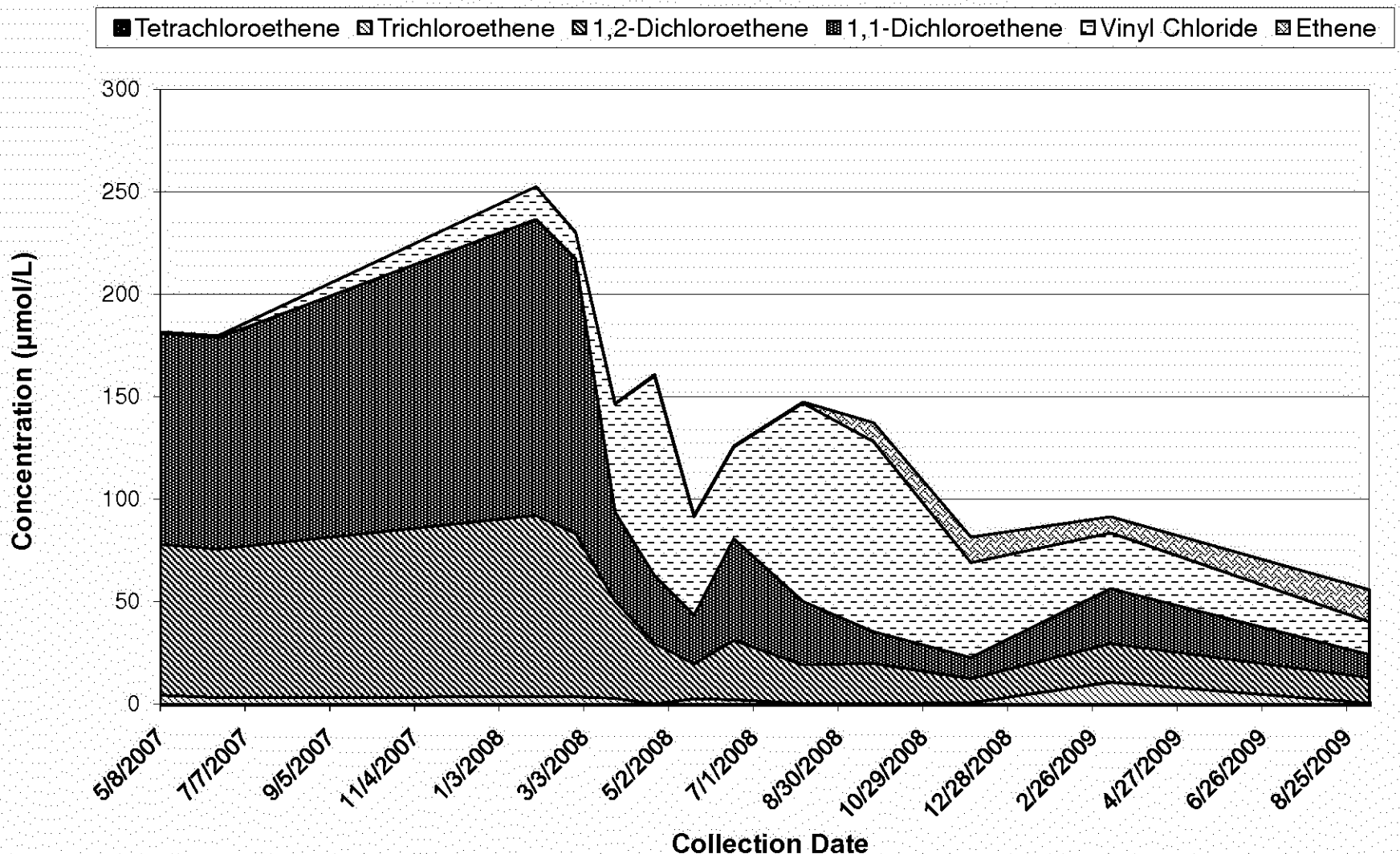
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - VOC Molar Concentrations



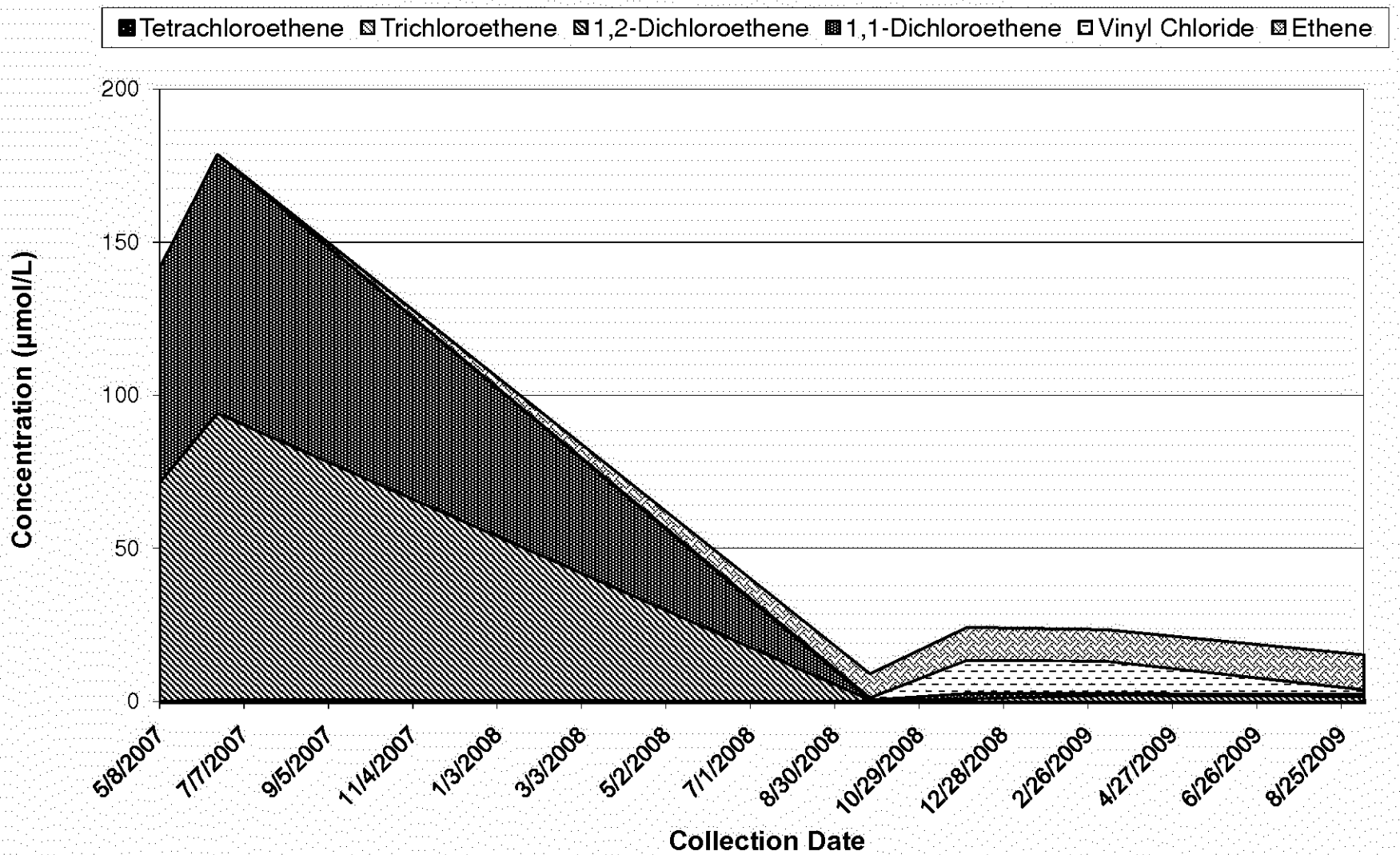
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0075UB - VOC Molar Concentrations



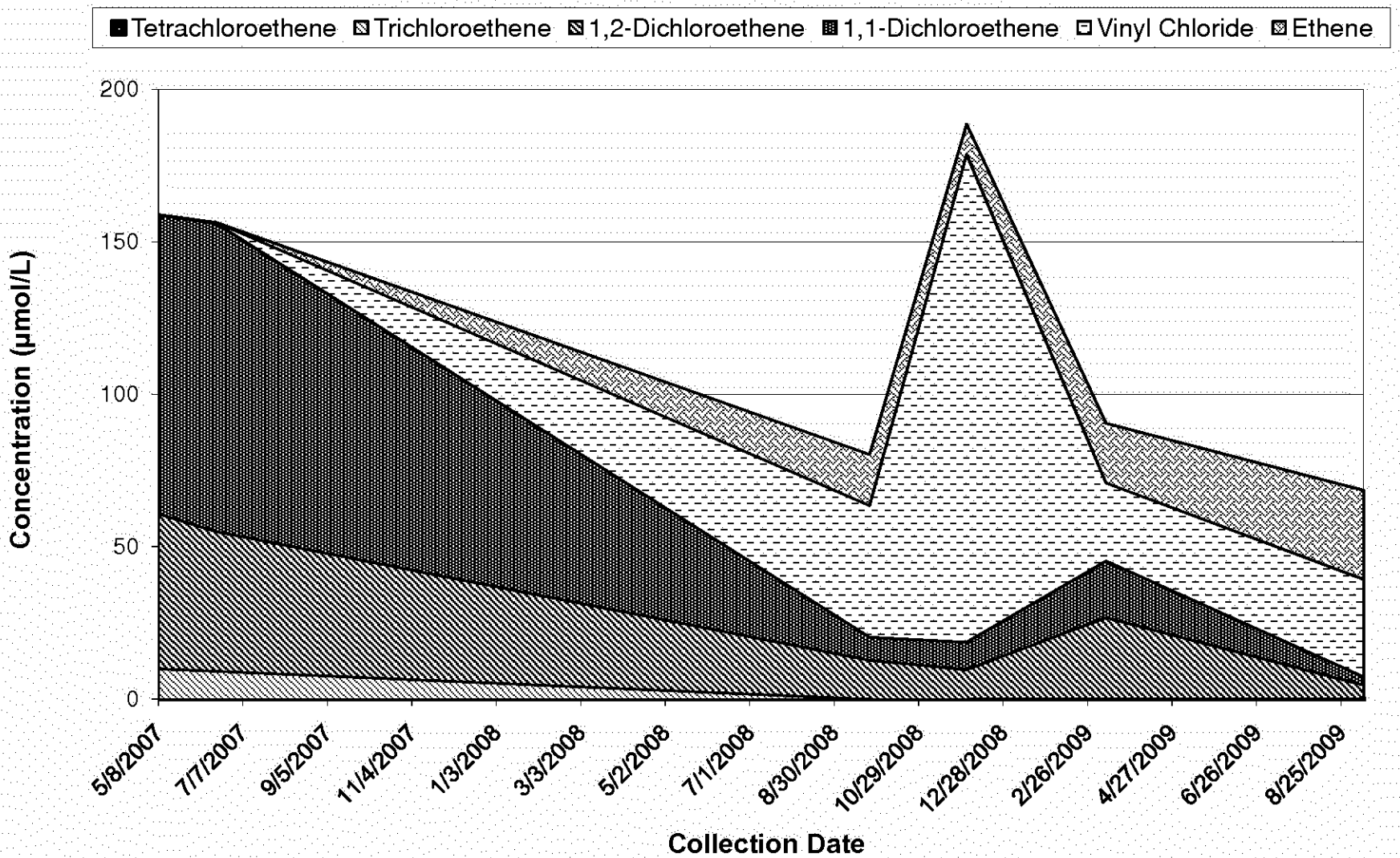
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0065UB - VOC Molar Concentrations



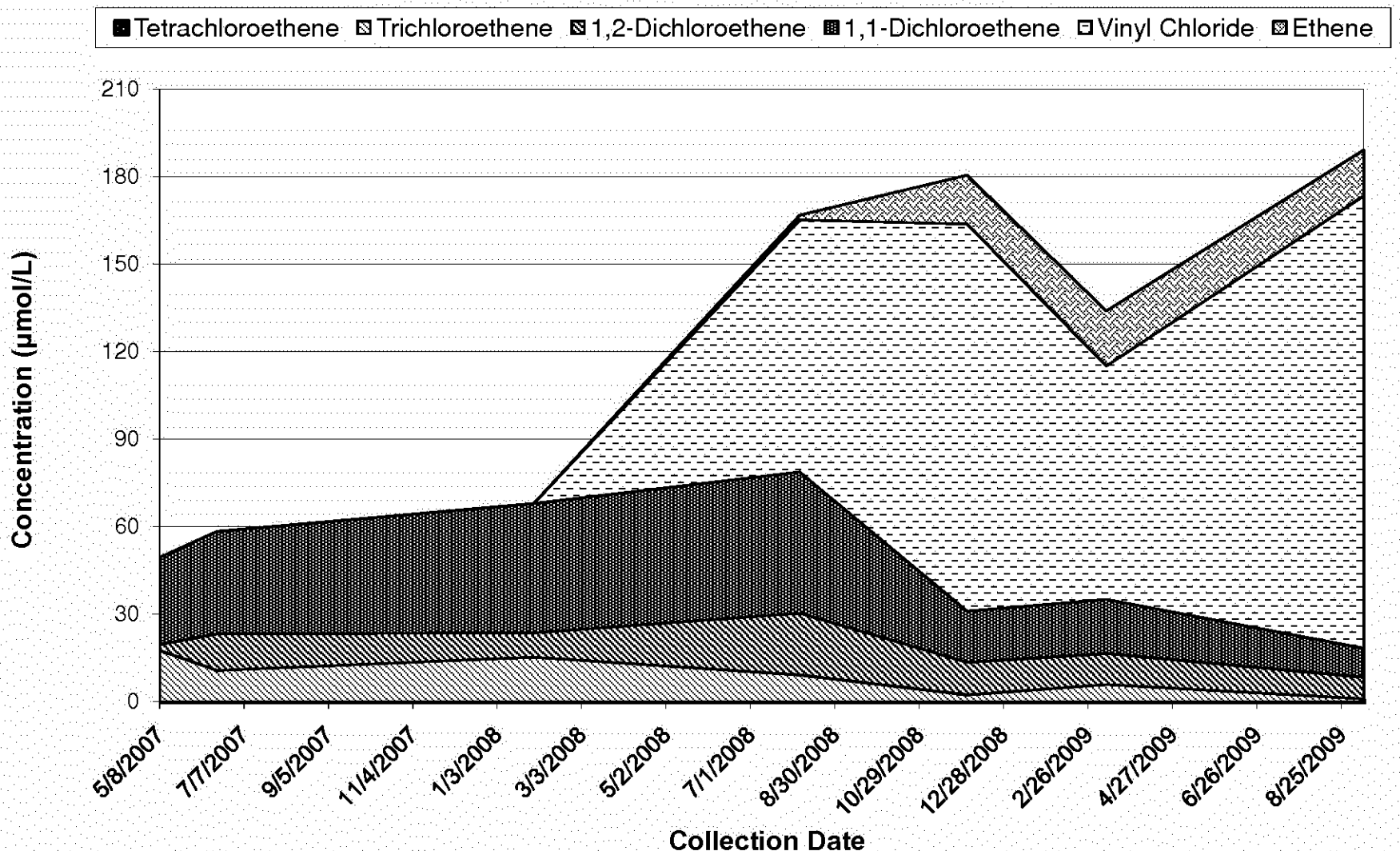
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0064UB - VOC Molar Concentrations



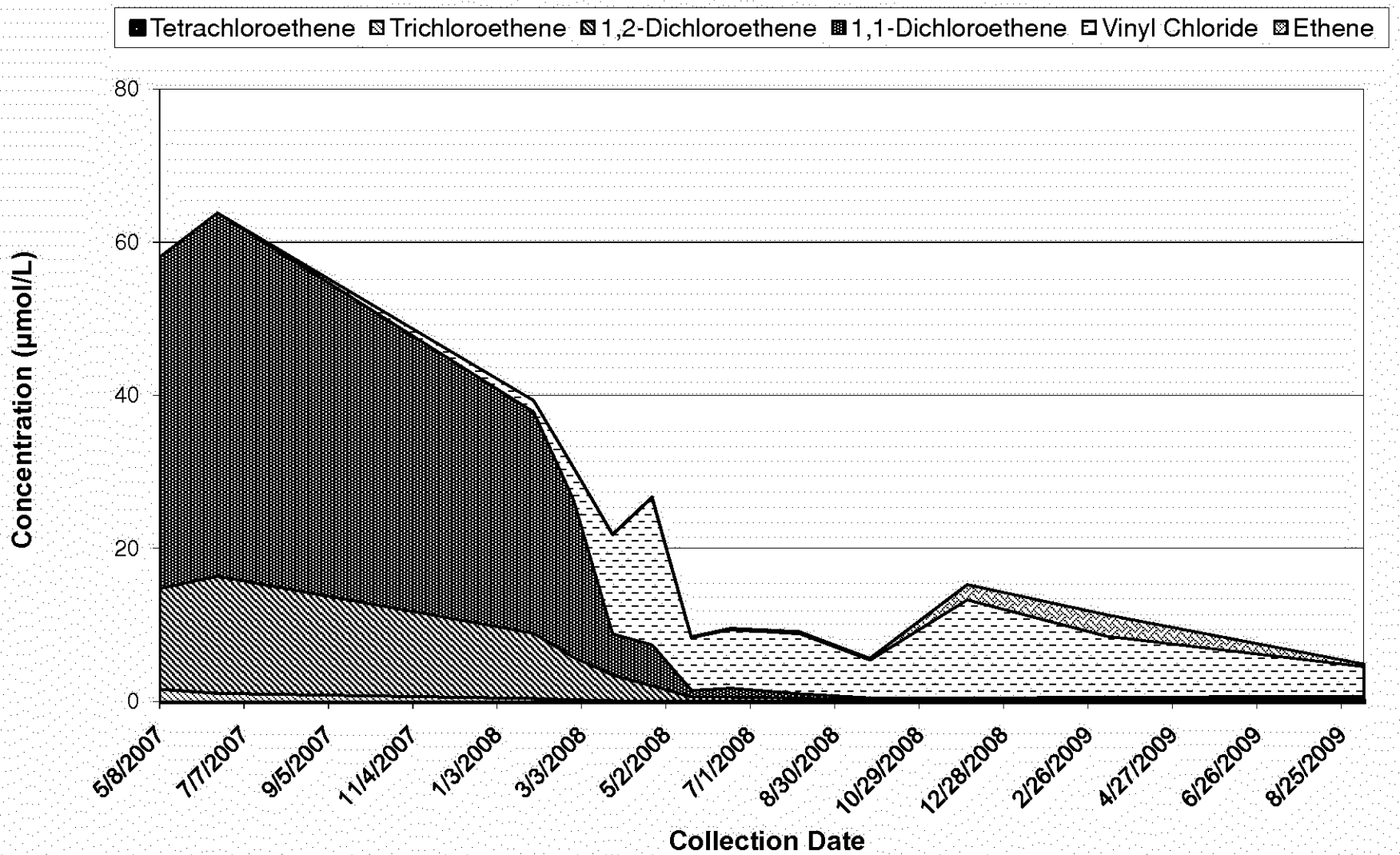
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - VOC Molar Concentrations



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

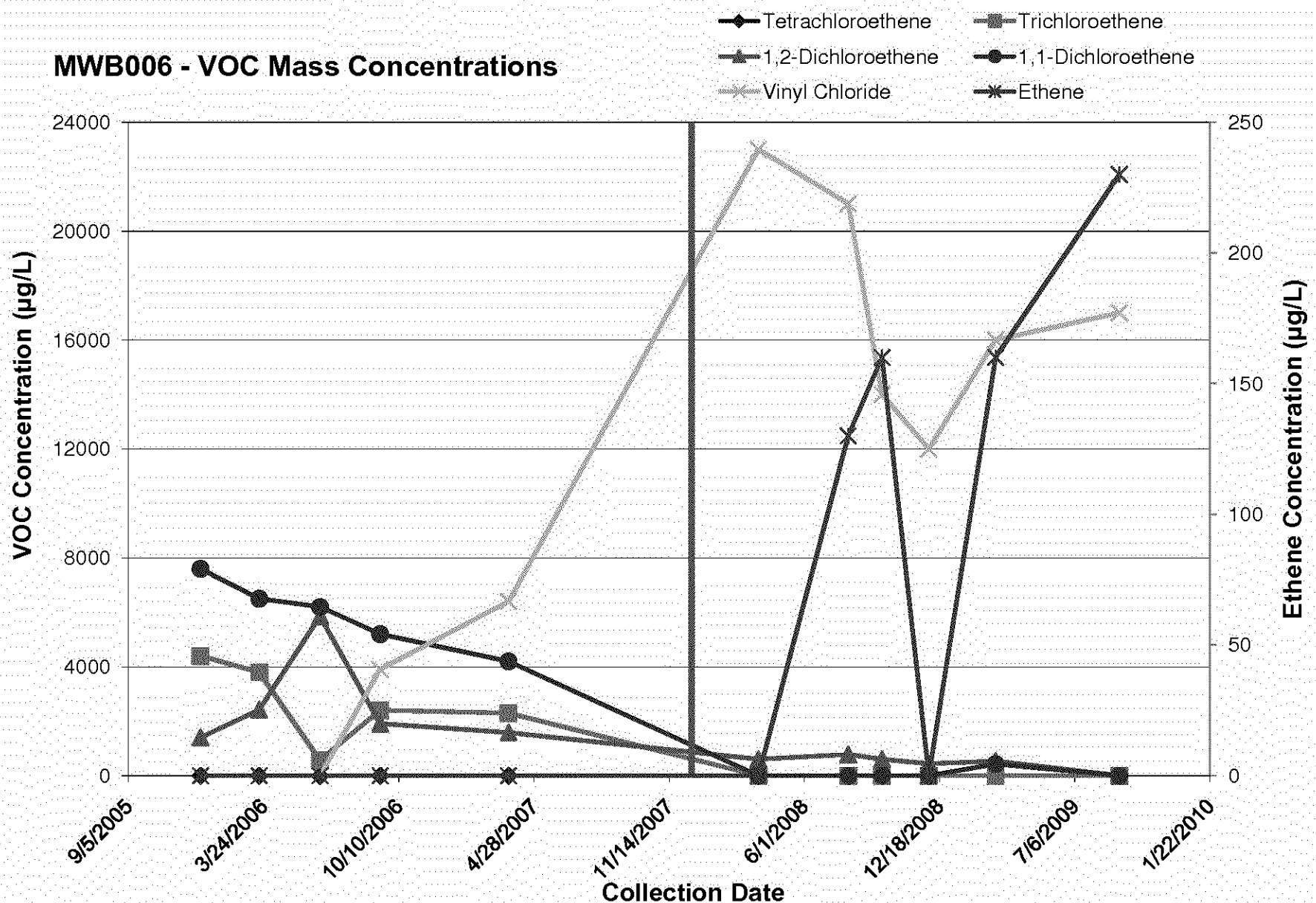
AW0073C - VOC Molar Concentrations



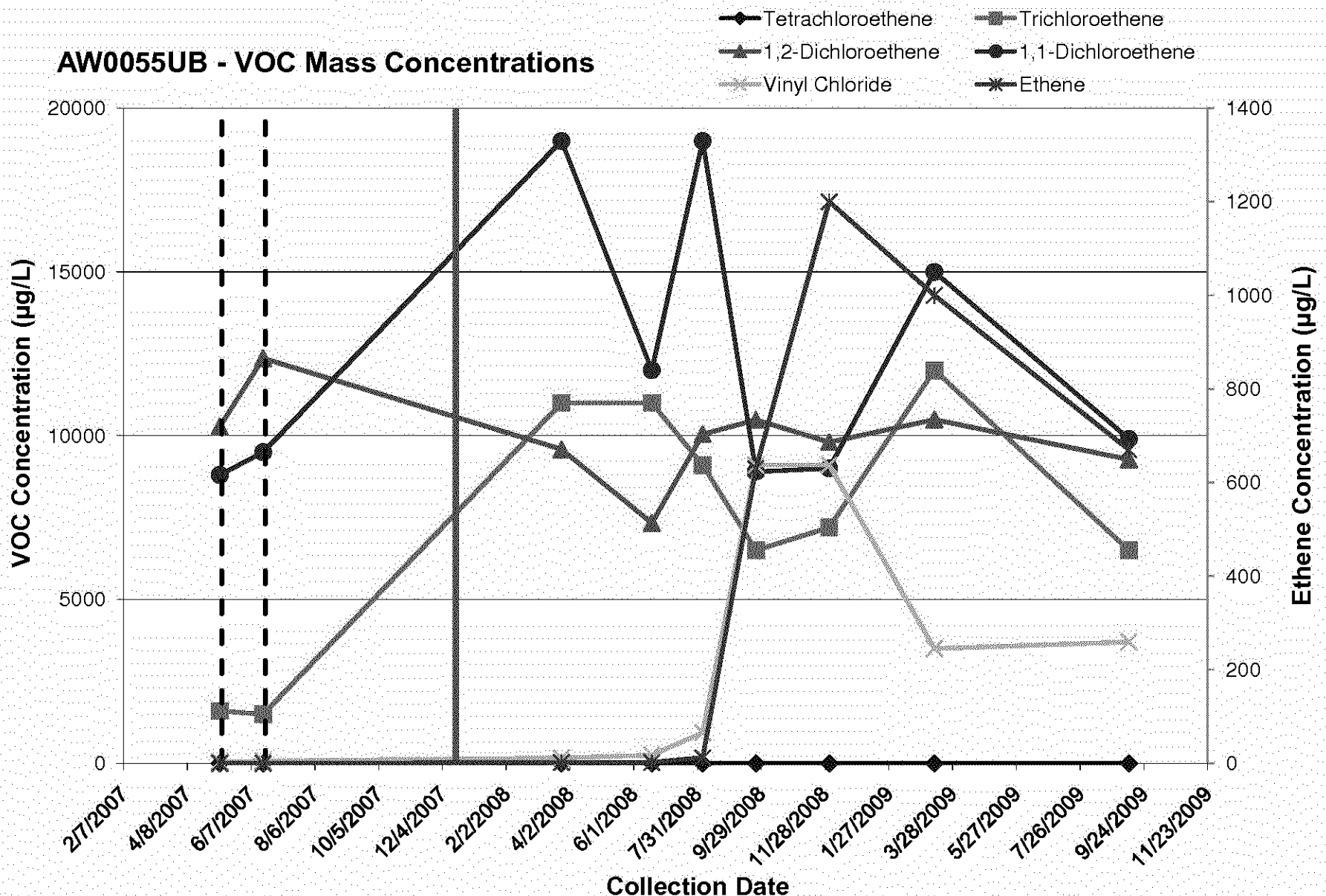
Mass Concentrations of CVOCs (PCE, TCE, 1,1-DCE, 1,2-DCE, & VC) and Ethene

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

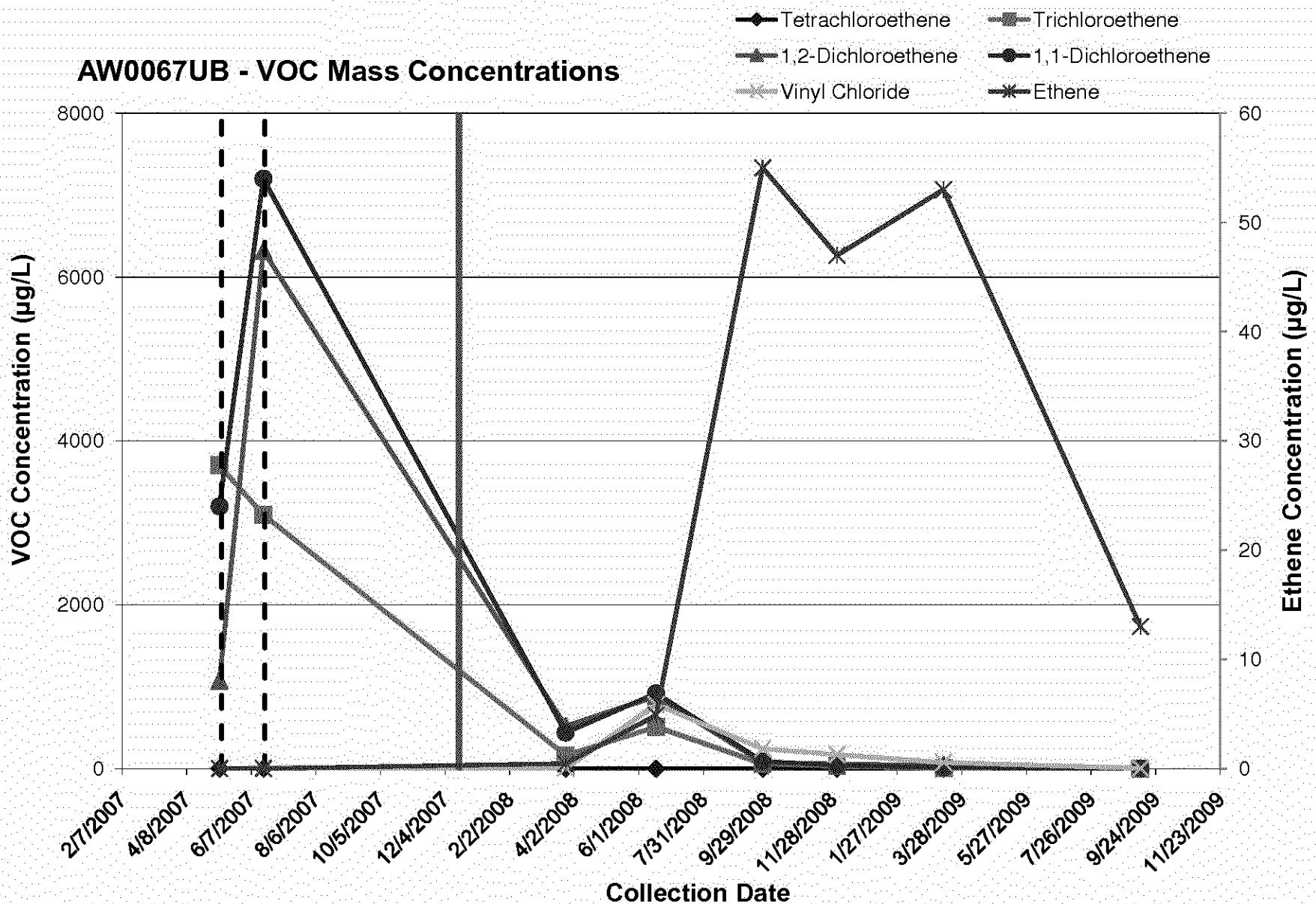
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



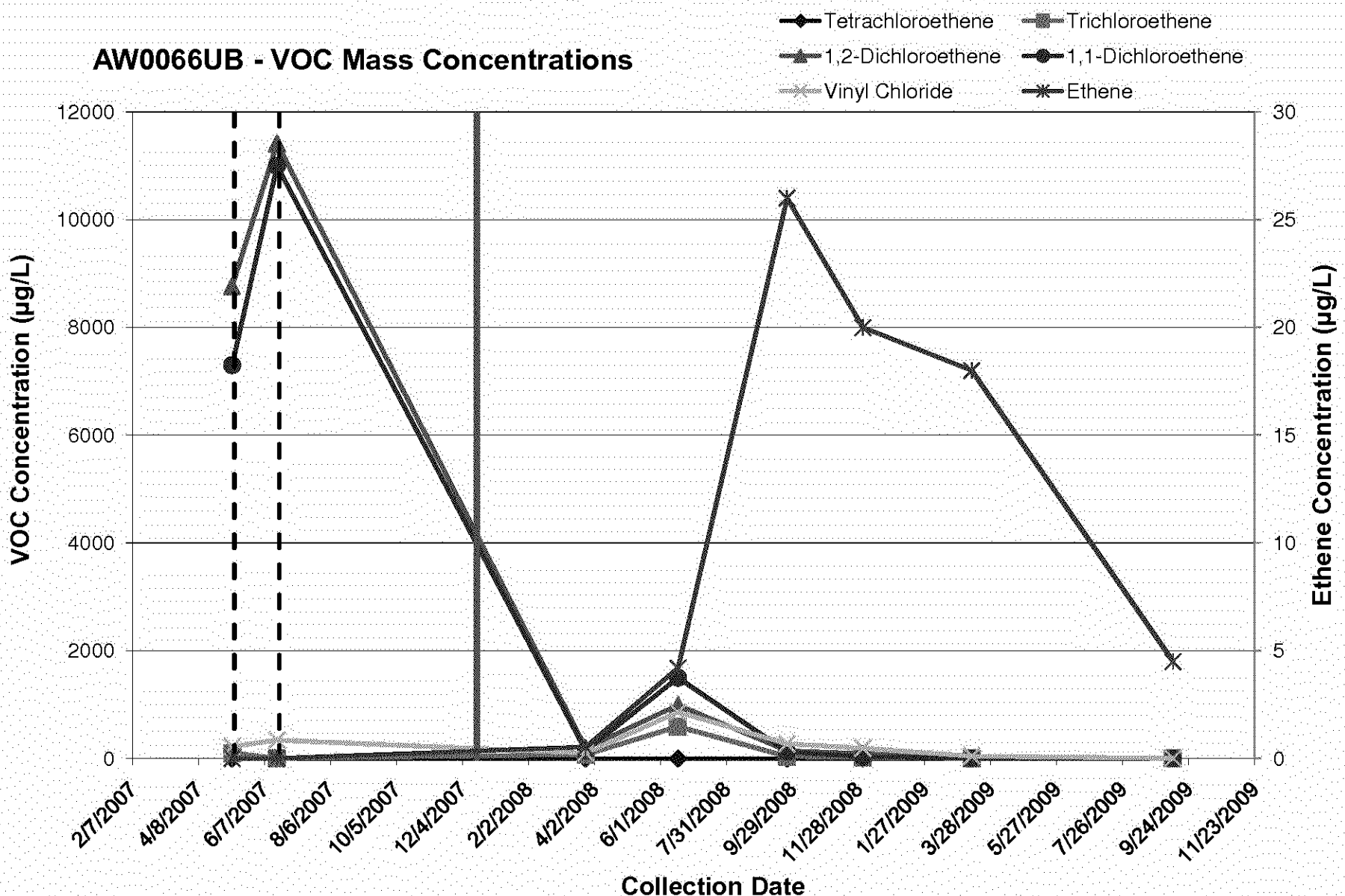
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



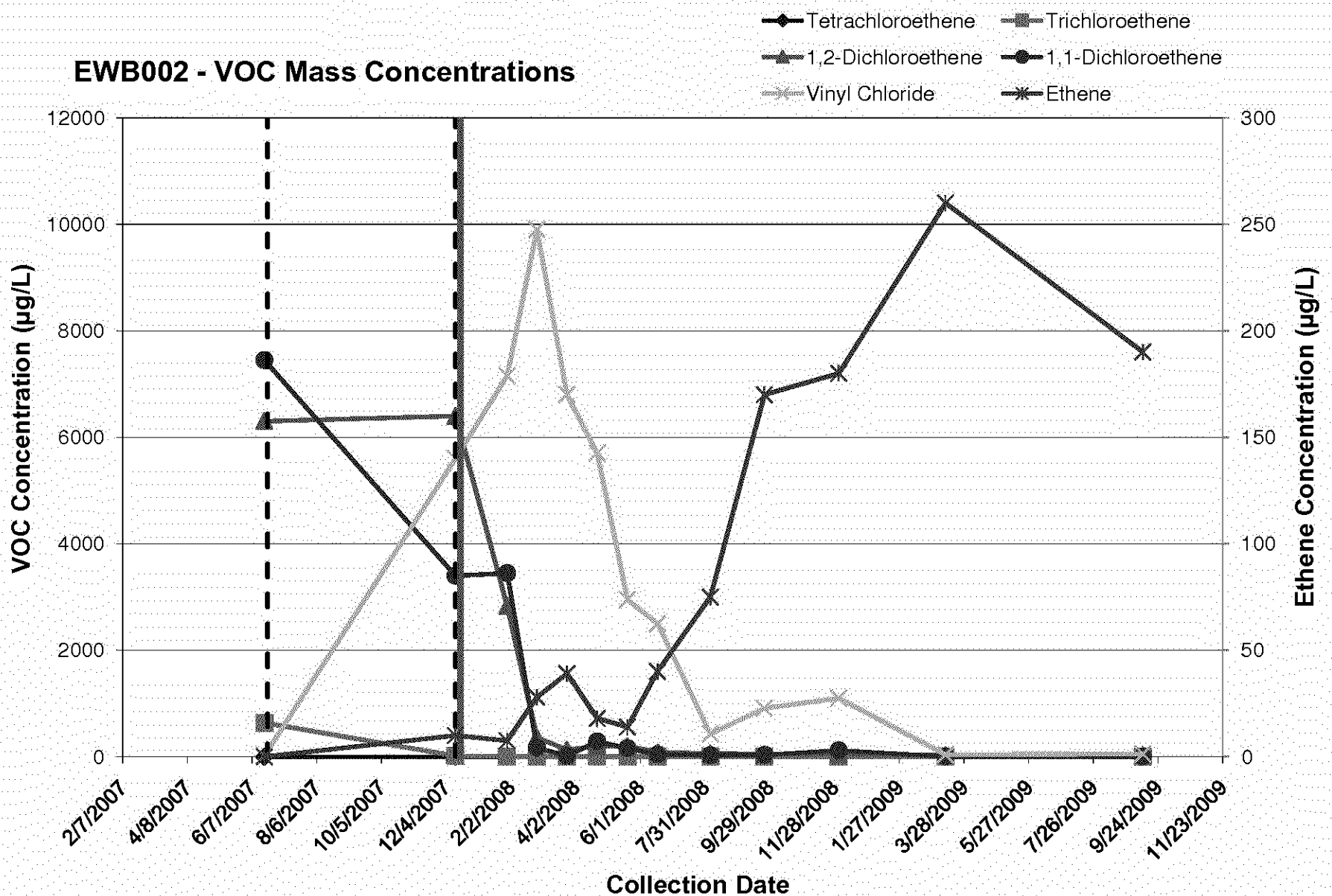
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



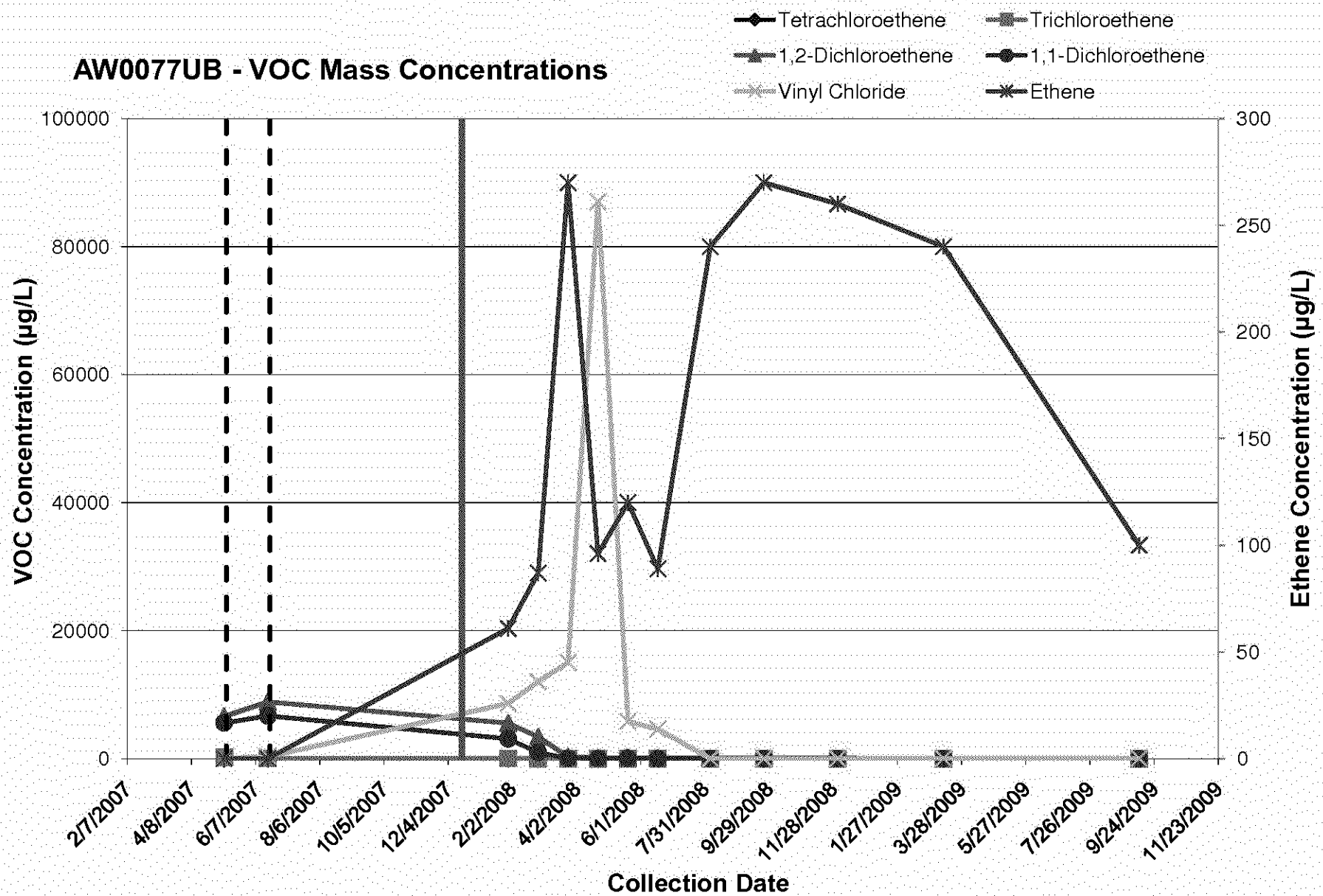
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



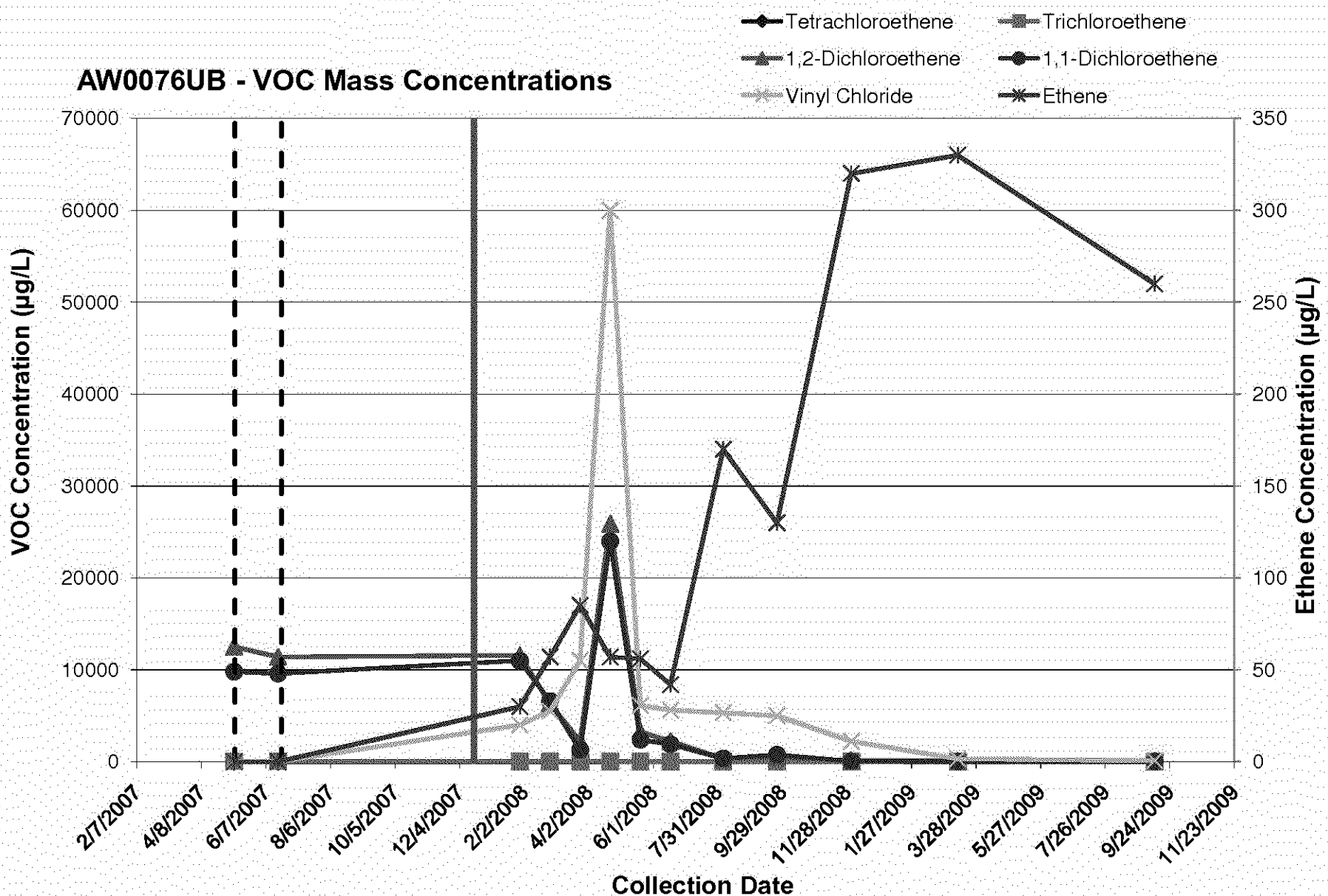
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



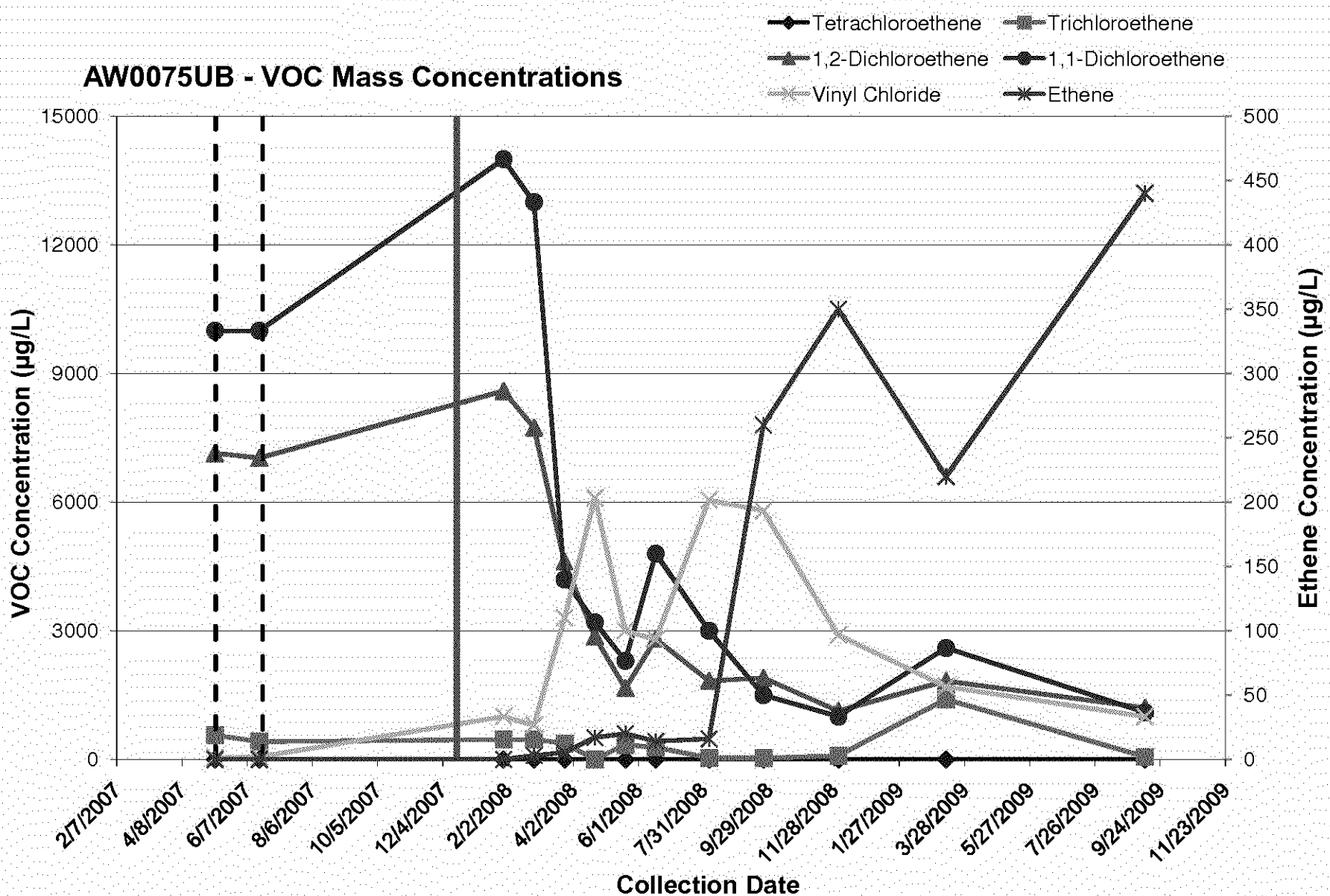
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



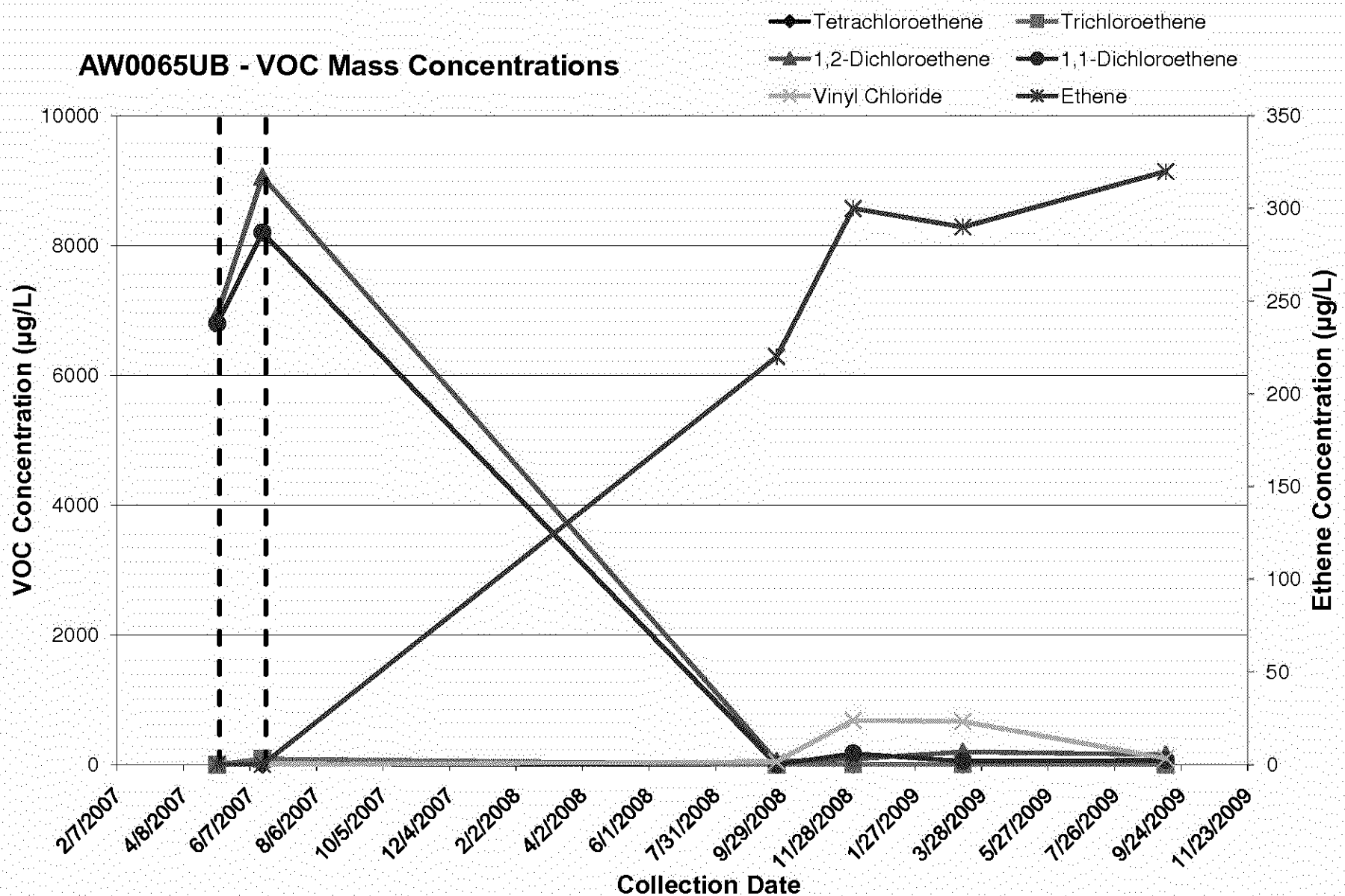
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



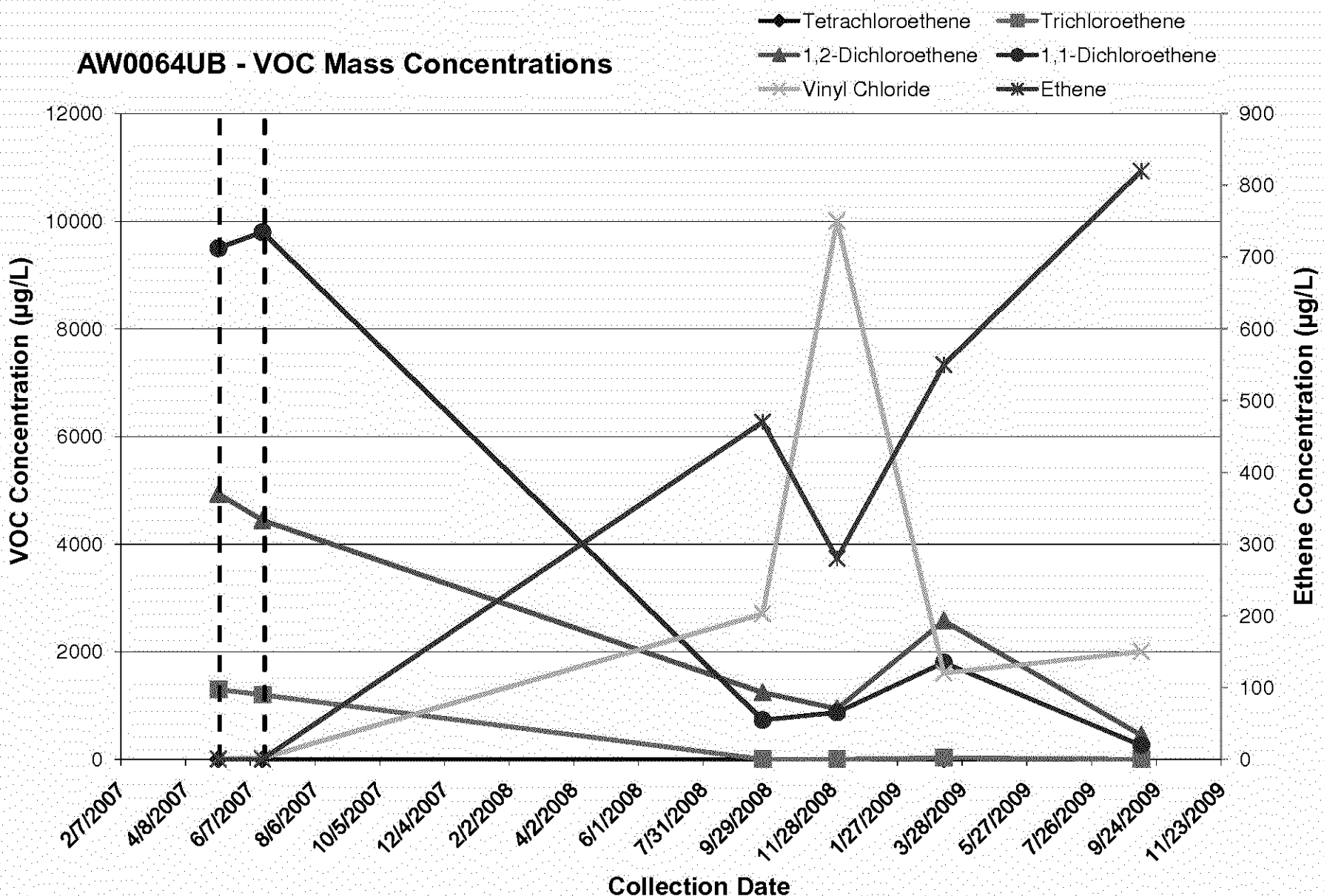
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



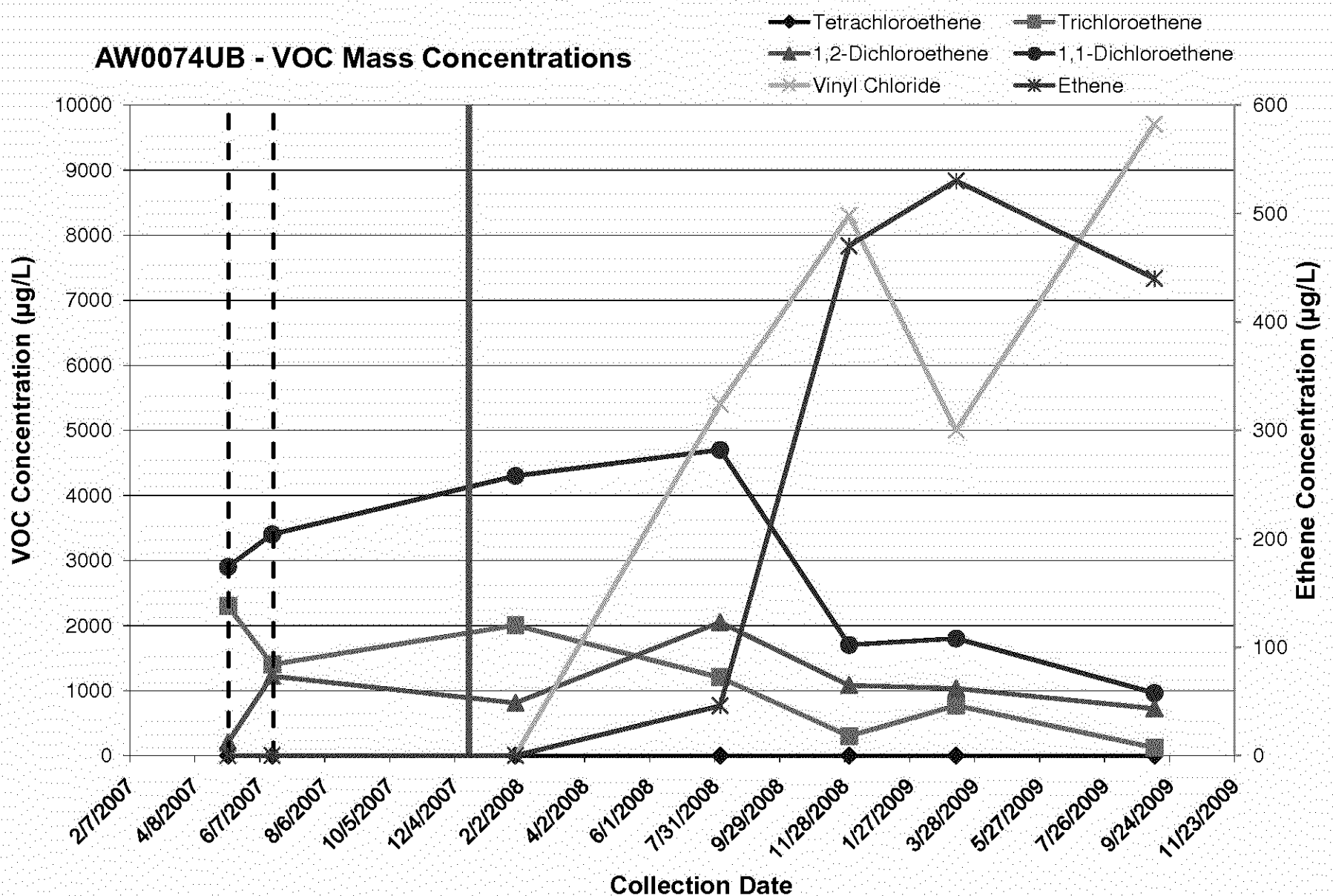
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



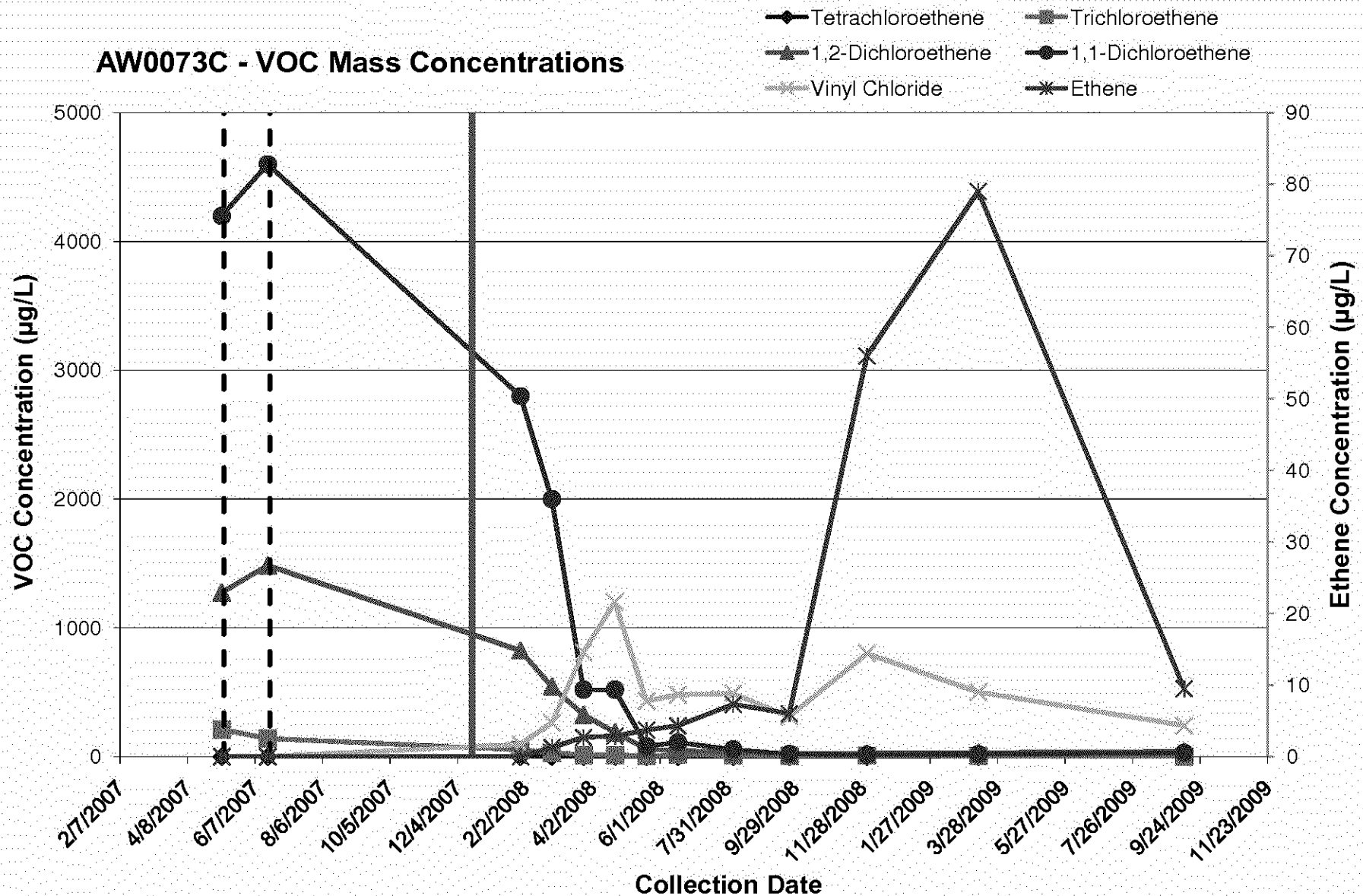
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

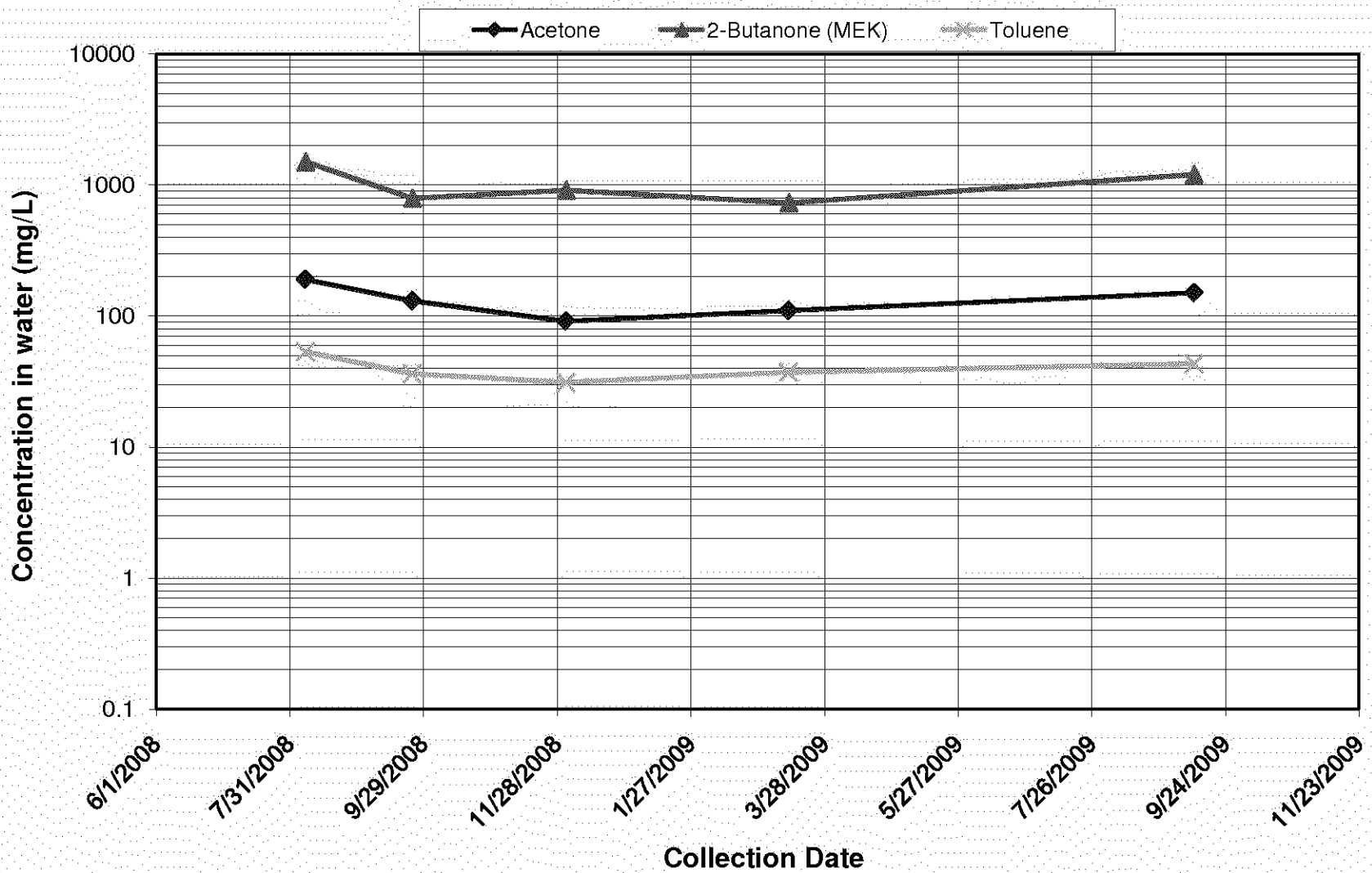


Other VOCs of Interest (Acetone, MEK, and Toluene)

Graphed wells include (in order): MWB006, AW0055UB, AW0067UB, AW0066UB, EWB002, AW0077UB, AW0076UB, AW0075UB, AW0065UB, AW0064UB, AW0074UB, and AW0073C

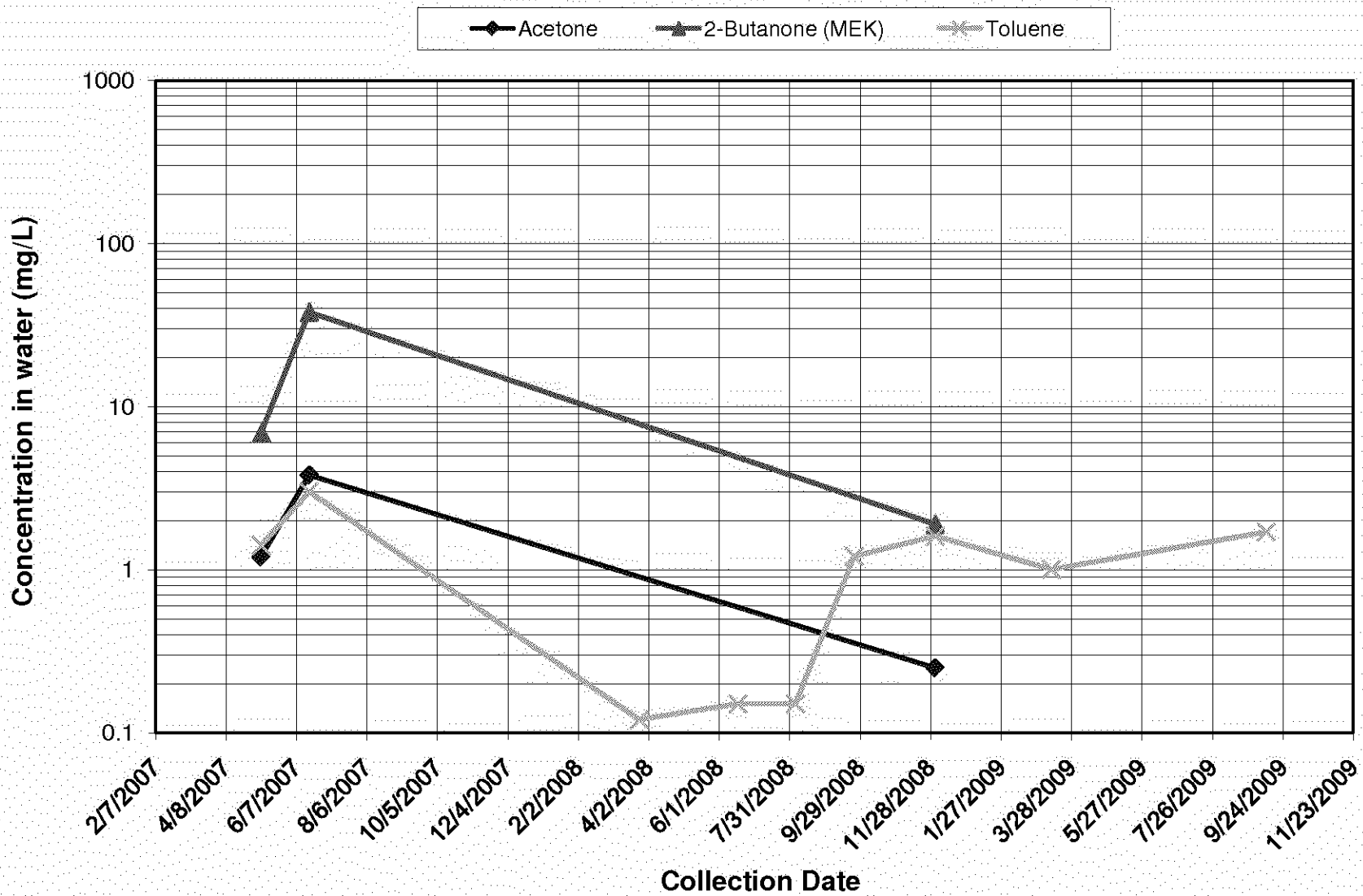
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

MWB006 - Other VOCs of Interest



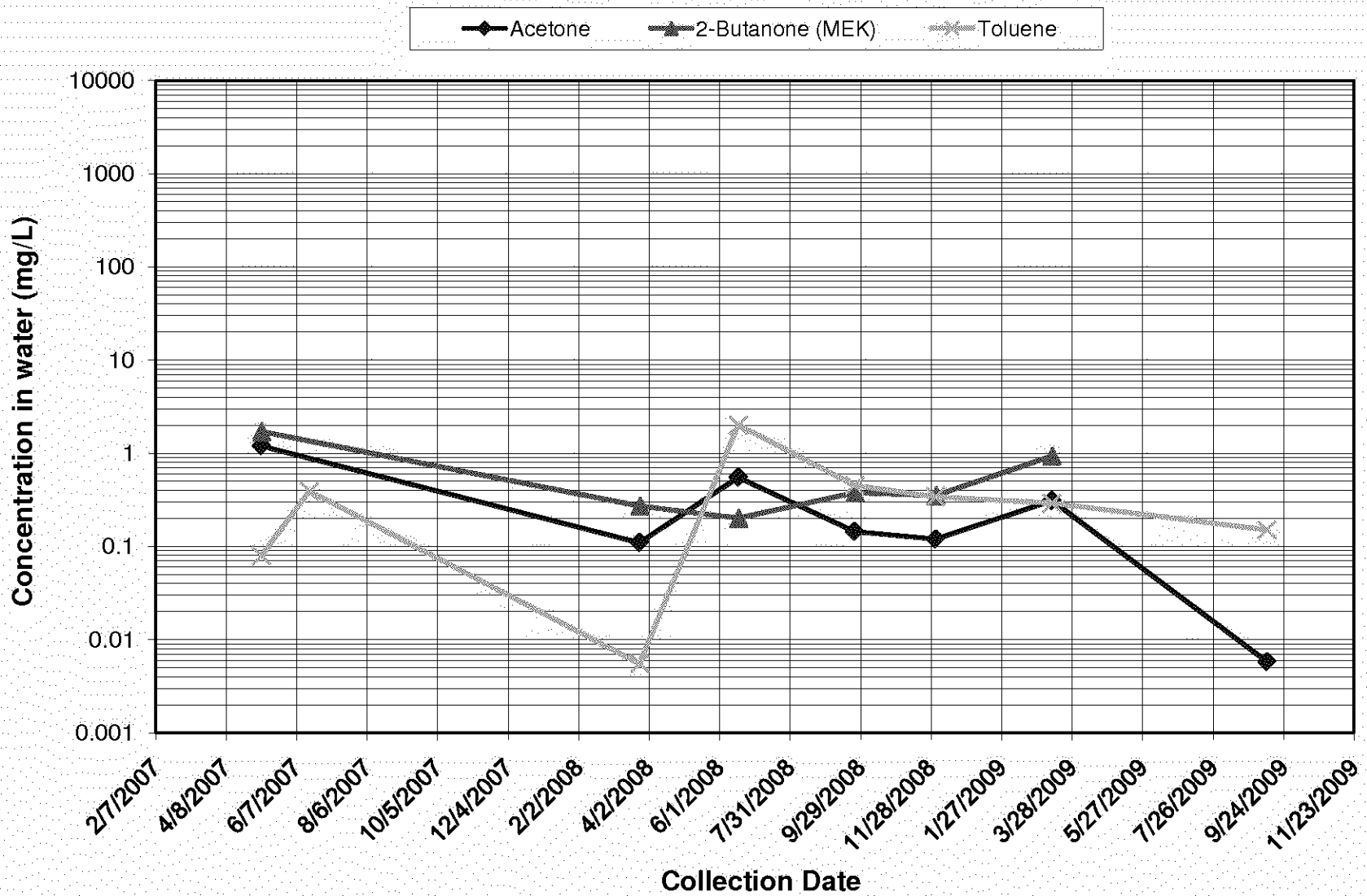
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0055UB - Other VOCs of Interest



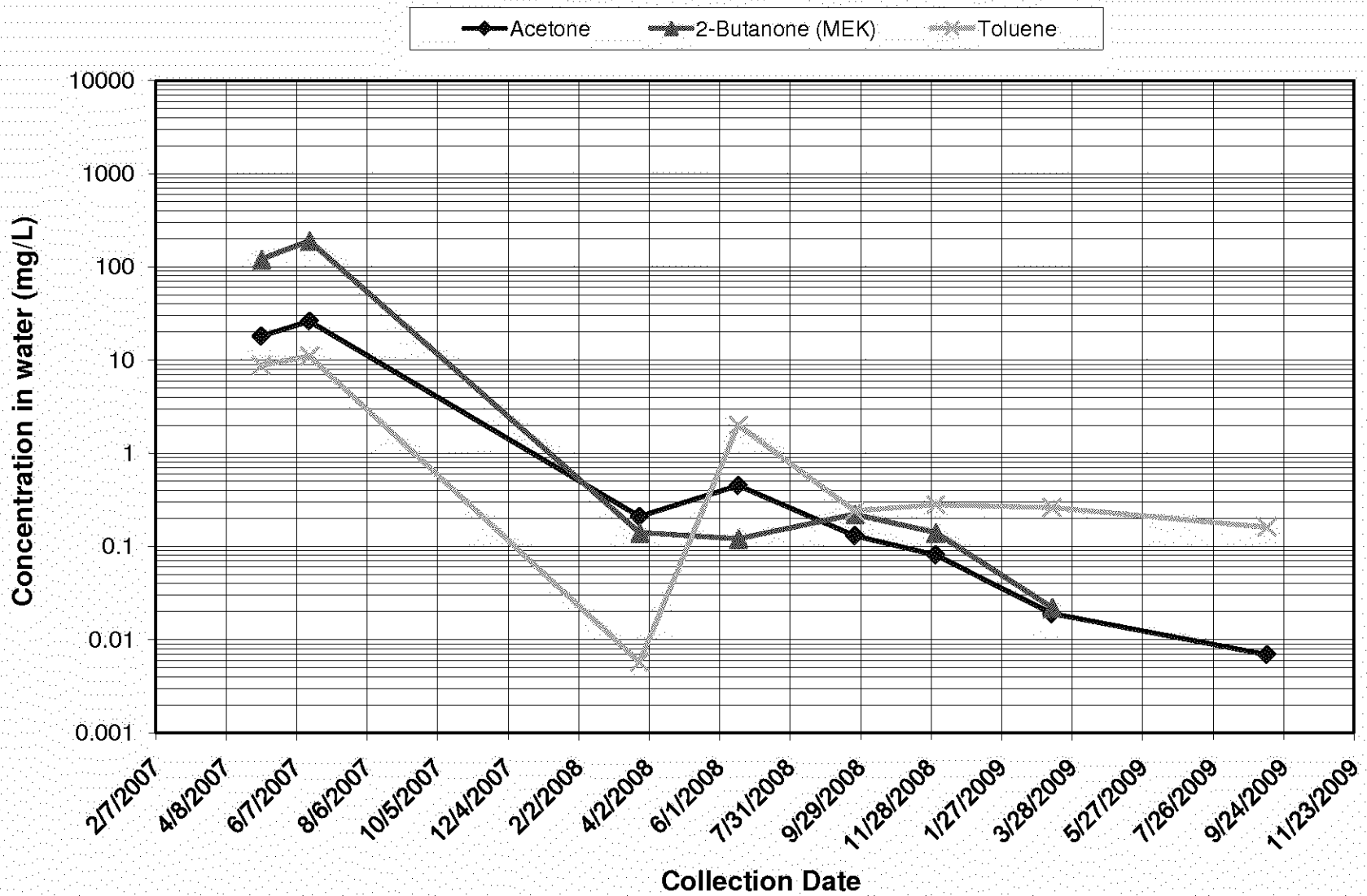
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0067UB - Other VOCs of Interest



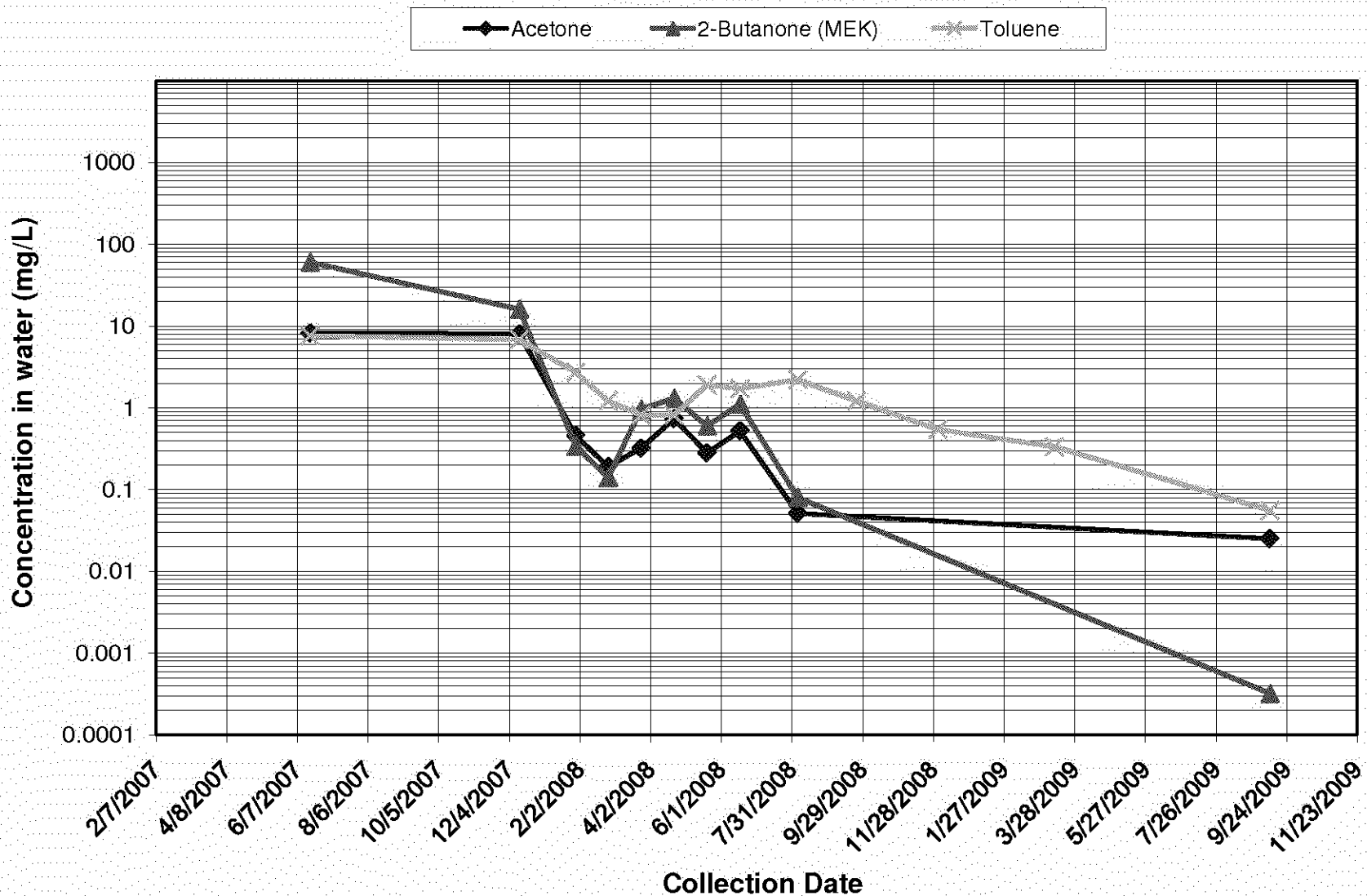
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0066UB - Other VOCs of Interest



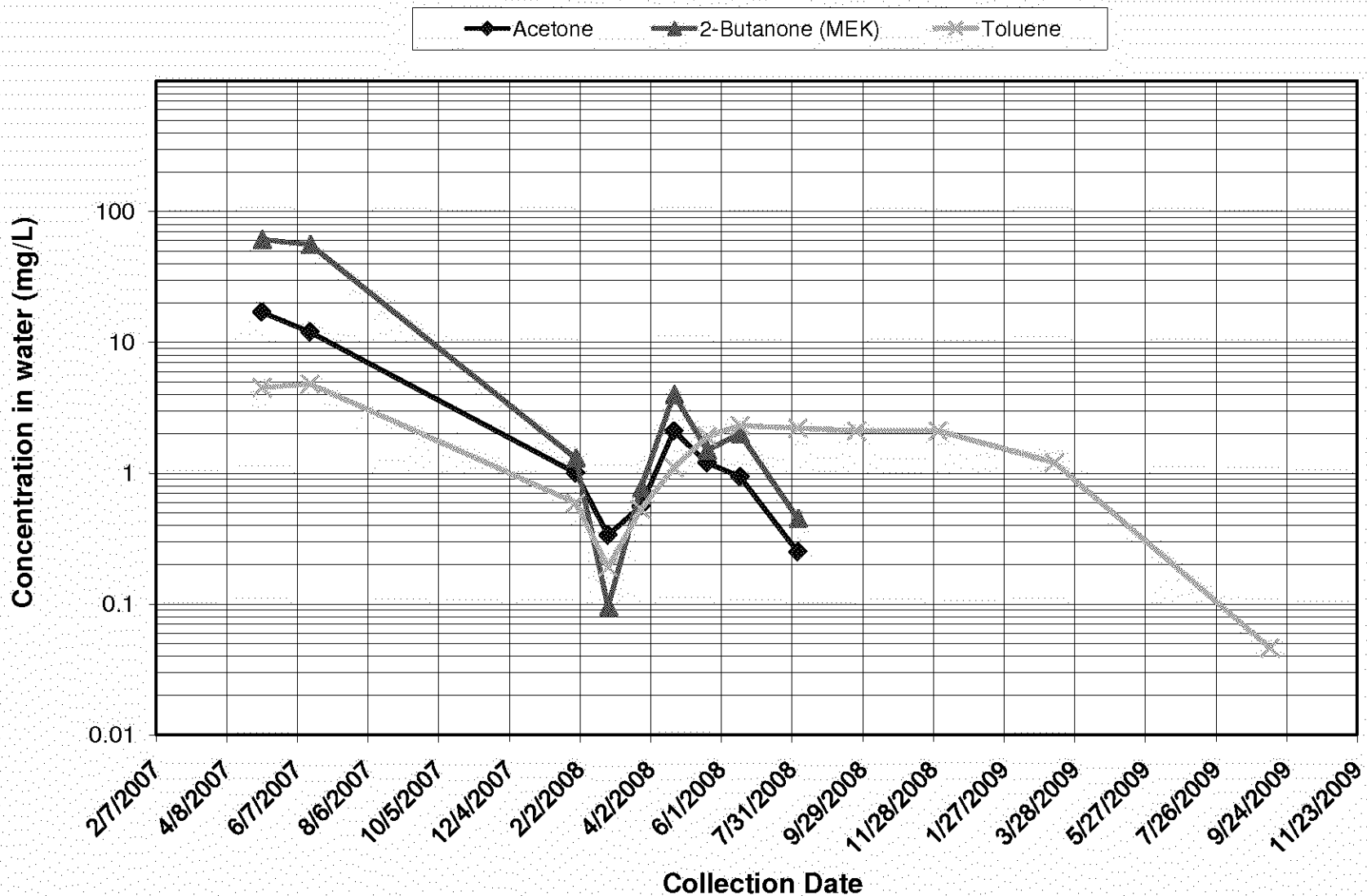
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

EWB002 - Other VOCs of Interest



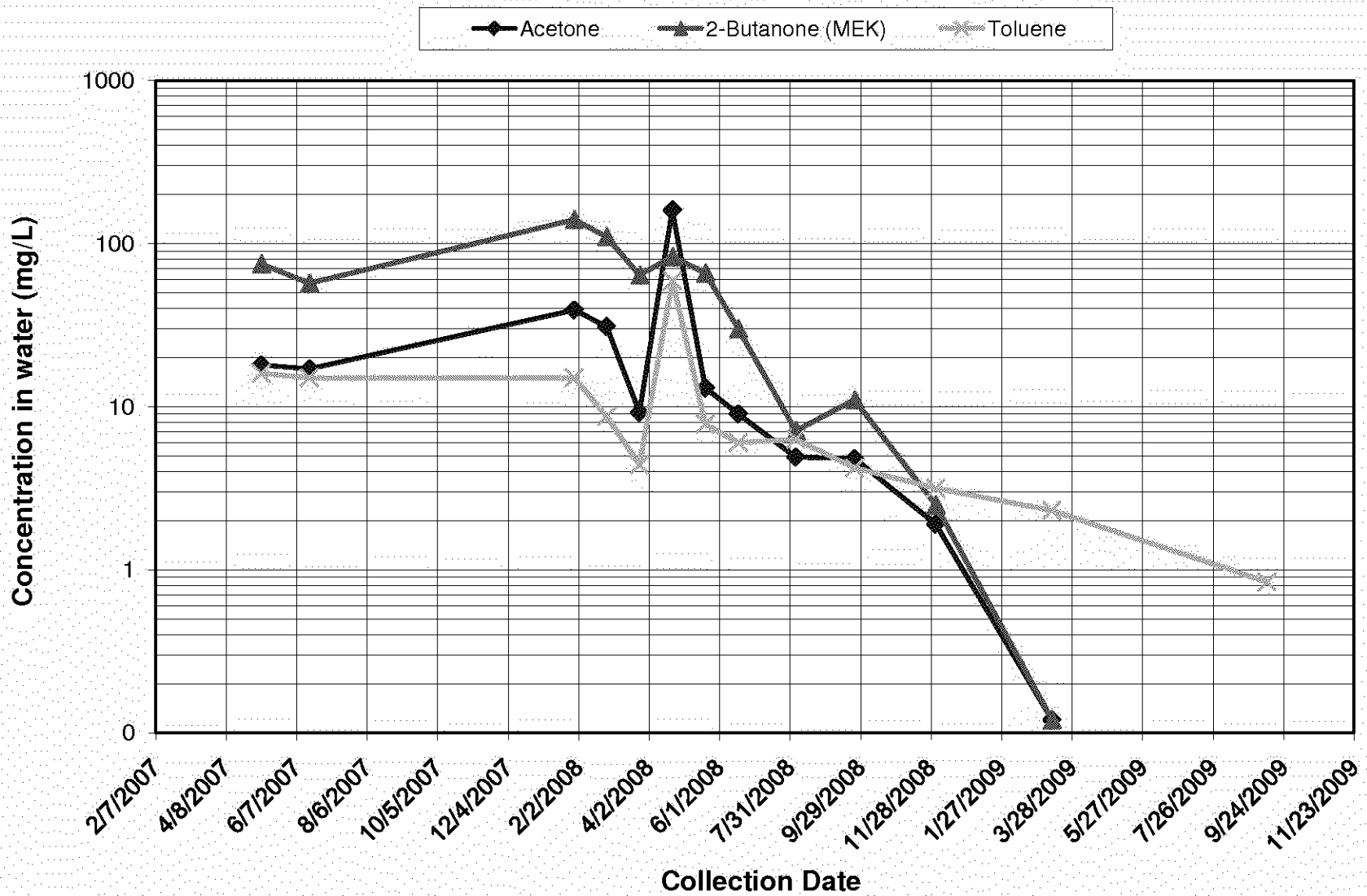
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0077UB - Other VOCs of Interest



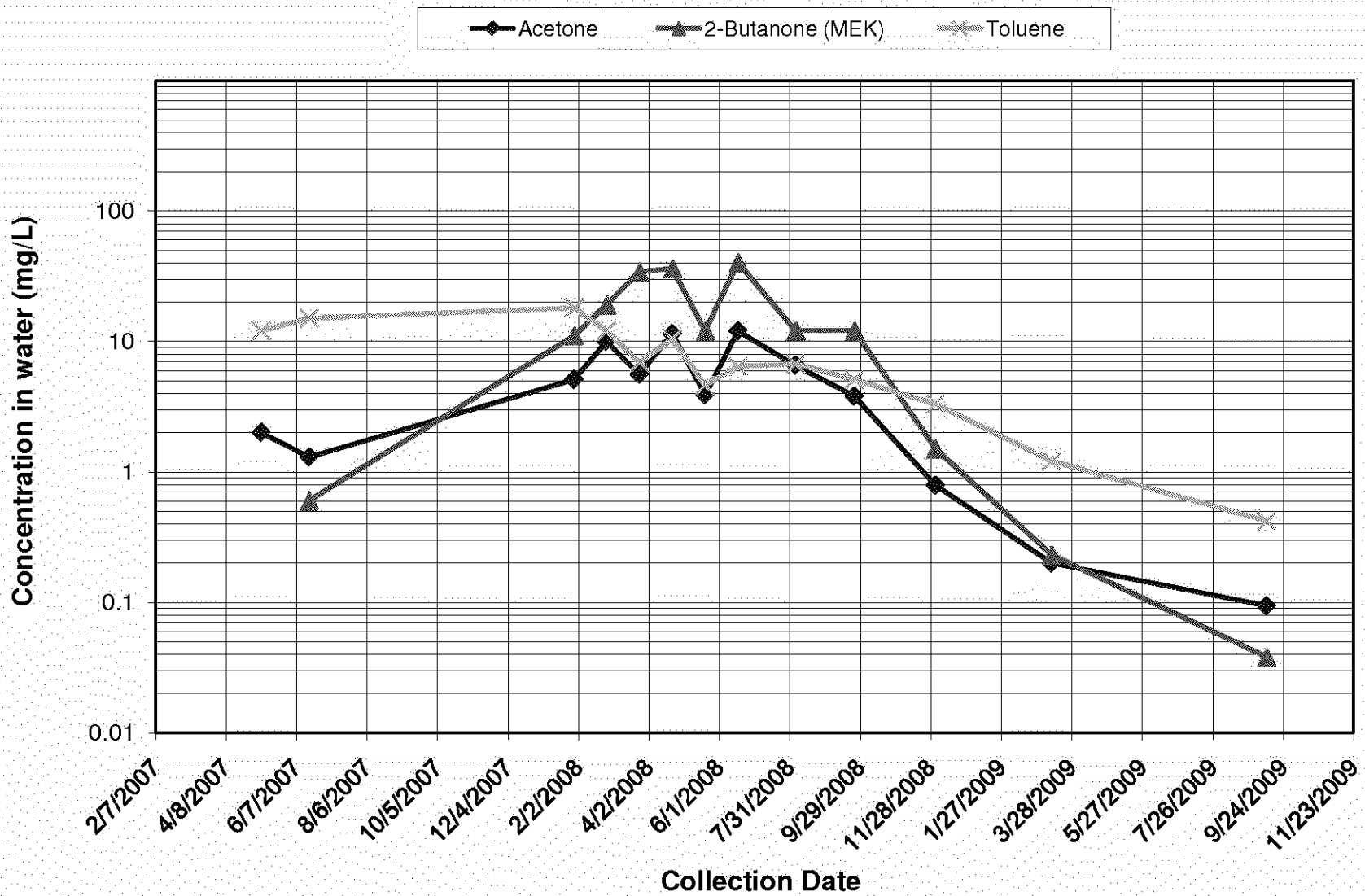
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0076UB - Other VOCs of Interest



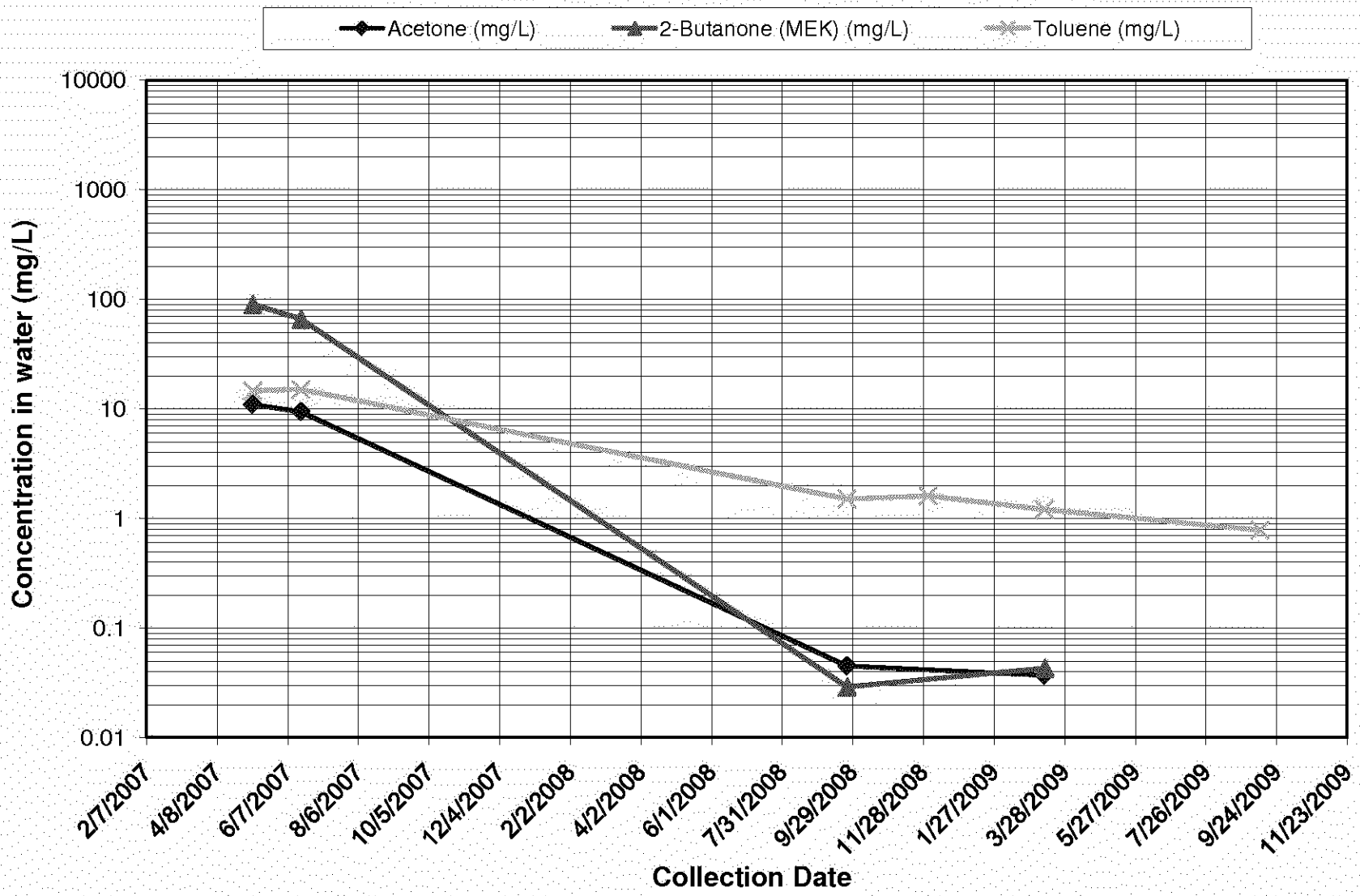
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0075UB - Other VOCs of Interest



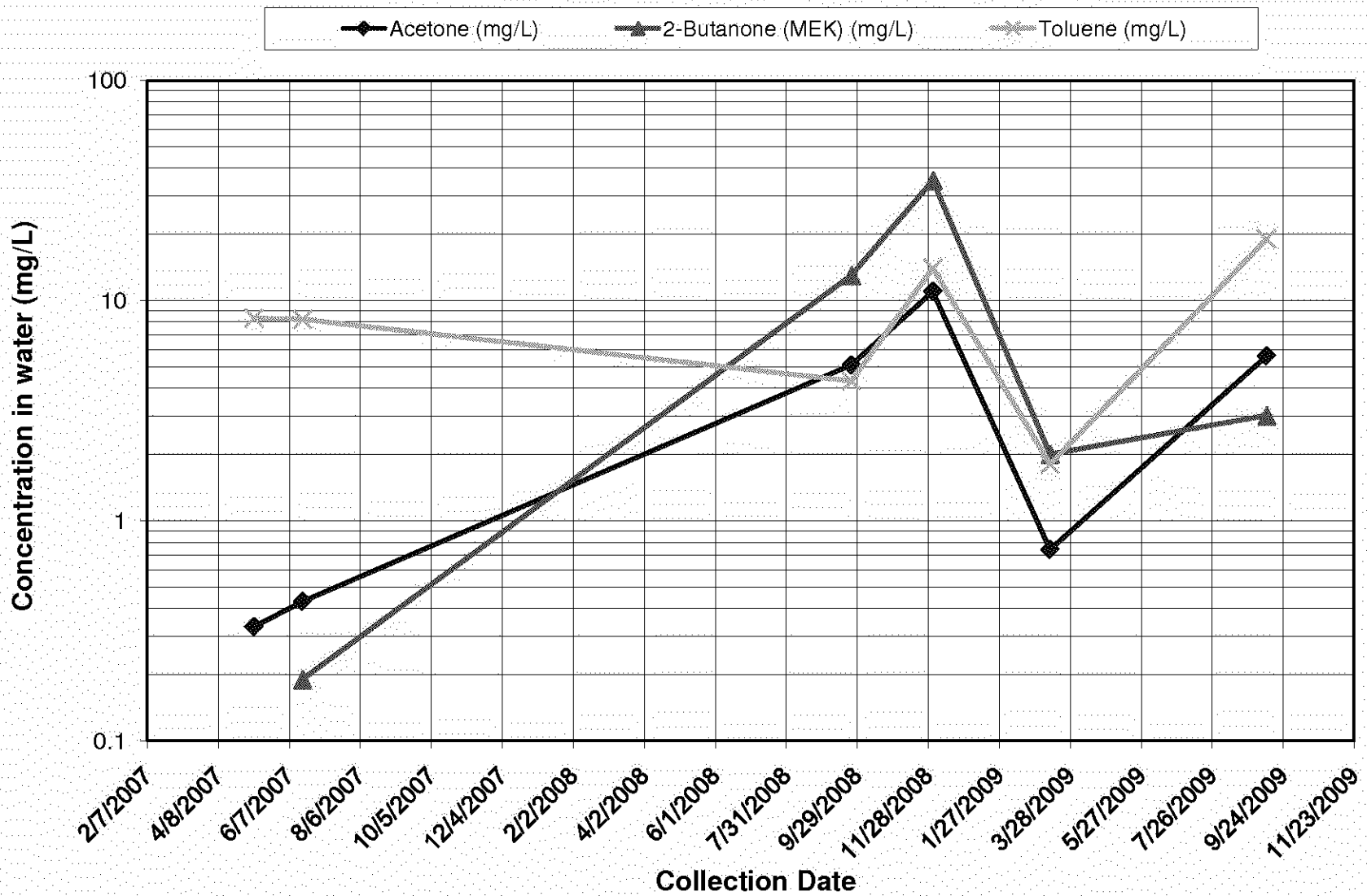
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0065UB - Other VOCs of Interest



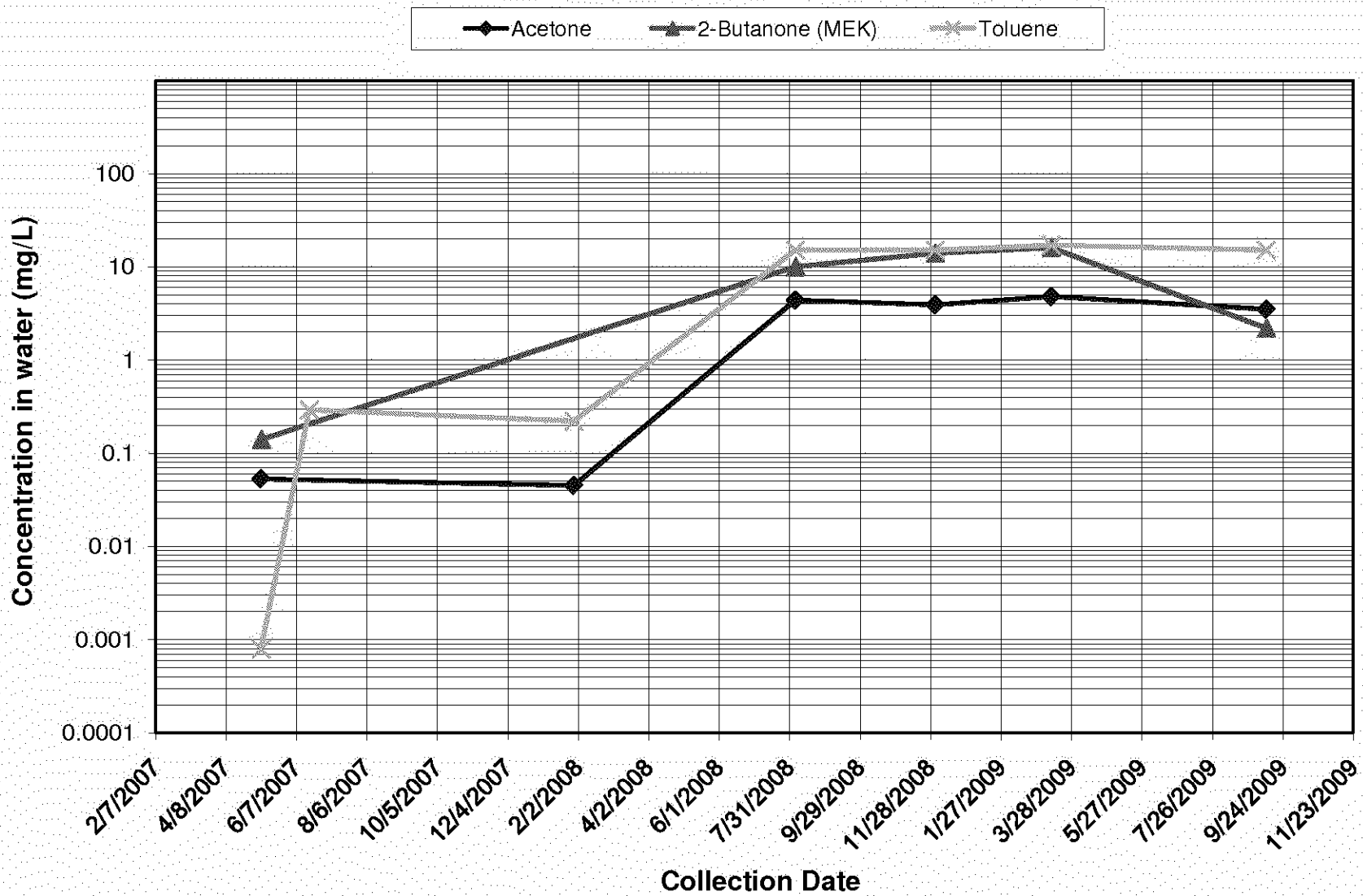
Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0064UB - Other VOCs of Interest



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0074UB - Other VOCs of Interest



Former Building 1/36 Pilot Bio-recirculation Test Data
Former C-6 Facility, Los Angeles, CA

AW0073C - Other VOCs of Interest